ADEQ Arizona Department of Environmental Quality

ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM AUTHORIZATION TO DISCHARGE STORMWATER FROM A MUNICIPAL SEPARATE STORM SEWER SYSTEM TO WATERS OF THE UNITED STATES

This permit provides authorization to discharge under the Arizona Pollutant Discharge Elimination System (AZPDES) program, in compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Article 3.1; Arizona Administrative Code (A.A.C.), Title 18, Chapter 9, Article 9, and amendments thereto; and the Clean Water Act as amended (33 U.S.C. 1251 et seq.). The permittee, the

City of Tucson
P.O. Box 27210
Tucson, AZ 85726-7210

is authorized to discharge stormwater from the municipal separate storm sewer system (MS4) operated by the city of Tucson to waters of the United States in accordance with the terms and conditions set forth in this permit.

This permit becomes effective on September 1, 2011.

This permit and the authorization to discharge expires at midnight, August 31, 2016.

Michael A. Fulton, Director
Water Quality Division
Arizona Department of Environmental Quality
Signed this 26th day of July 2011

Table of Contents

Tables

Appendices

1.0 AUTHORIZATION

1.1 Applicability

In accordance with 40 CFR 122.26(a) (3) (i), incorporated by reference in A.A.C. R18-9-A905, this permit authorizes the discharge of stormwater from the municipal separate storm sewer system (MS4) owned and operated by the city of Tucson (hereafter, Tucson or the city), a large MS4, to waters of the United States (waters of the U.S.) and includes the incorporated area(s) of Tucson.

1.2 Authorized Discharges

Subject to the terms and conditions of this permit, Tucson is authorized to discharge stormwater from all outfalls of the MS4 owned or operated by Tucson to waters of the U.S.

2.0 LEGAL AUTHORITY

The city shall continue to maintain and enforce legal authority to control the discharge of pollutants to the MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize Tucson to:

2.1 Control the contribution of pollutants to the MS4 by stormwater discharges associated with industrial activity (as defined by 40 CFR 122.26(b)(14)) and the quality of stormwater discharged from sites of industrial activity;

2.2 Control the contribution of pollutants to the MS4 by stormwater discharges associated with construction activity and the quality of stormwater discharged from construction sites;

2.3 Prohibit illicit connections and discharges to the MS4;

2.4 Control discharges to the MS4 of spills, dumping, or disposal of materials other than stormwater;

2.5 Require compliance with conditions in ordinances, permits, contracts or orders;

2.6 Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition of illicit discharges to the MS4; and

2.7 Establish requirements for post-construction stormwater controls.

3.0 LIMITATIONS OF COVERAGE

The city shall obtain separate authorization under another AZPDES permit for discharges related to its industrial and construction stormwater discharges, or discharges of non-storm waters. This permit does not authorize the following discharges:

3.1 Stormwater Associated with Industrial Activity
Stormwater associated with industrial activity as defined in 40 CFR 122.26(b) (14) (i)-(ix) and (xi).

3.2 Stormwater Associated with Construction Activity
Stormwater associated with construction activity as defined in 40 CFR 122.26(b) (14) (x) or 40 CFR 122.26(b) (15).

3.3 Non-Stormwater
Non-stormwater, including De Minimis discharges as defined in Section 10 (Definitions) of this permit.

3.4 Stormwater Mixed with Non-stormwater
Stormwater mixed with sources of non-storm water (except those non-stormwater discharges and flows listed in 40 CFR 122.26(d)(2)(iv)(B)(1), and determined not to be a source of pollutants).

3.5 Impaired Waters
Discharges of stormwater to waters listed as impaired on Arizona's 303(d) and other impaired water list(s), only allowed as specified in Section 6.0 (Special Conditions) of this permit.

3.6 Outstanding Arizona Waters
Stormwater to waters identified as outstanding Arizona (OAW) waters in A.A.C. R18-11-112, except as specified in Section 6.0 (Special Conditions) of this permit.

4.0 SURFACE WATER QUALITY STANDARDS

4.1 Tucson shall protect water quality by reducing, to the maximum extent practicable (MEP), discharges that cause or contribute to an exceedance of any applicable surface water quality standard (SWQS) of the State of Arizona (Arizona Administrative Code, Title 18, Chapter 11, Article 1), including the narrative limitations applicable to waters of the U.S receiving discharges from the MS4. To do so, Tucson shall fully implement the Stormwater Management Program (SWMP), referenced in Section 5.0, any subsequent revisions, and all requirements of this permit, including appendices.

4.2 The city shall compare stormwater quality monitoring data, as measured from the monitoring locations specified in Section 7.0, Table 1 of this permit, to the SWQSs applicable to the waters of the U.S. receiving the discharge from the MS4.[1] A pollutant concentration that is greater than the applicable surface water quality standard is not considered a violation of this permit when Tucson is implementing control measures designed to reduce the discharge of pollutants to the MEP in the drainage area(s) where such exceedances have occurred. In the event that a pollutant concentration greater than the applicable SWQS is detected, Tucson shall continue to perform monitoring of stormwater discharges as required by Section 7.3.

If monitoring data collected under this permit show a recurring (more than once) exceedance at a monitoring location, the city shall investigate and make all reasonable efforts to identify potential source(s) of the pollutant(s).[2] The city shall evaluate the effectiveness of existing control measures on the pollutant(s) of concern and modify existing control measures or implement additional control measures, as necessary, to reduce the discharge of pollutants to the MEP.

4.3 If despite full implementation of the SWMP and other requirements of this permit, the city finds that a discharge contains pollutants above a surface water quality standard, Tucson shall report this information in the annual report. This report shall include, at a minimum, the information specified in Section 8.3 of this permit. For recurring discharges containing pollutants above a SWQS, actions taken to investigate and identify sources and any recommended control measures for reducing the discharge of pollutants shall be included in the annual report.

4.4 If a recurring exceedance of a SWQS exists at a monitoring location and it is determined pursuant to Subsection 4.2 that additional control measures or actions within the control of Tucson may reduce a recurring discharge of pollutant(s) above the SWQS, the city shall immediately begin to implement those control measures, or alternatively propose to the department an action plan including a schedule for implementation.[2] In the event the city elects to propose an action plan, the plan (including the schedule for implementation) must be submitted to the department within 30 days of identifying the recurring exceedance (in accordance with Subsection 4.2). If discharge containing pollutants above an applicable surface water quality standard persists and the city has not modified existing control measures or implemented additional control measures to reduce the discharge of

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[1] When data is analyzed consistent with Section 7.0 of this permit, and results are below the Limit of Quantitation (LOQ), the permittee is to report flagged data. However, in this event, such data is not considered to be an 'exceedance' or to definitively 'contain pollutants above a SWQS' for the purposes of Section 4.0.

[2] *E. coli* values above the SWQS are prevalent in Arizona in high flow precipitation events. For this pollutant, unless the permittee is discharging into an outstanding Arizona water or a waterbody impaired for *E. Coli*, extensive investigation is not required. However, the permittee shall review available information for obvious or high contributing sources, and human sources that can be readily managed or eliminated.

pollutants to the MEP, this permit may be reopened and modified as provided in R18-9-B906 and 40 CFR 122.62.

5.0 STORMWATER MANAGEMENT PROGRAM (SWMP)

5.1 Program Implementation

The city shall continue to implement and maintain a Stormwater Management Program (SWMP) designed to reduce, to the MEP, pollutant discharges to and from the MS4 that is owned or operated by Tucson. The SWMP shall comply with the requirements specified in 40 CFR 122.26(d) (2) (iv), incorporated by reference in A.A.C. R18-9-A905. The SWMP shall also incorporate provisions related to the requirements specified in the permit appendices, and generally describe how the data required to be reported will be collected and maintained.

5.2 Measurable Goals

At a minimum, Tucson shall implement and maintain control measures and associated frequencies, amounts, timeframes, and other measurable goals specified in Appendix A of this permit. Upon the effective date of this permit, the city shall begin updating the SWMP as necessary to comply with the provisions of this permit, including Appendix A. In addition to these requirements, the city shall implement additional stormwater and non-stormwater control measures or actions as necessary to reduce the discharge of pollutants to and from the MS4 to the MEP.

5.3 Program Updates

Tucson shall submit two (2) copies of the updated SWMP (plan) and associated attachments to ADEQ within one (1) year of the issuance date of this permit. The written plan shall include all of the information specified in Appendix C and shall be organized in a similar manner. The SWMP shall be submitted to the ADEQ Stormwater and General Permits Unit Manager at the address specified in Section 8.6 (Reporting Locations) of this permit.

5.4 Annual Program Review

The city shall conduct an annual review of the SWMP in conjunction with the preparation of the annual report required under Section 8.1 to evaluate the effectiveness of the program in reducing the discharge of pollutants, to the MEP, to and from the MS4 and to assess improvements in storm water quality.

5.5 Revisions to the SWMP

The city shall update the SWMP during the permit term as necessary to improve the effectiveness of the program in reducing the discharge of pollutants to and from the MS4 to the maximum extent practicable. Changes to the SWMP made in accordance with the following do not require formal modification of this permit:

1. Addition of New Control Measures: The city may add control measures to the SWMP at any time during the life of the permit. A description of these modification(s) shall be included in the subsequent annual report as required by Section 8.1 of this permit.
2. Addition of Temporary or Experimental Control Measures: In addition to the control measures described in the SWMP, the city may implement temporary (i.e., event driven) practices, experimental controls at any time during the life of the permit. Such control

measures may also be removed at the discretion of the city. The initiation and cessation of such controls measures and an assessment of the effectiveness of the temporary or experimental control measures shall be described in the subsequent annual report.

3. Increase of Existing Control Measures: Tucson may increase the amount or frequency of an existing control measure in the SWMP at any time during the life of the permit. A description of these modification(s) shall be included in the subsequent annual report.
4. Replacement of Existing Control Measures: Tucson may replace an ineffective control measure with an alternate control measure during the life of the permit with prior approval by ADEQ. Tucson shall demonstrate that the change will continue to achieve an equivalent or increased reduction in pollutants and shall provide the following information:

   a. A description of the control measure to be replaced;
   b. An explanation of why the existing control measure is ineffective;
   c. An analysis of how the replacement control measure is expected to achieve the goals of the control measure which is to be replaced; and
   d. An explanation of how the SWMP will continue to reduce the discharge of pollutants, to the maximum extent practicable, with the replacement of the original control measure.

[Note: Changing control measures from year to year are allowed by certain Appendix A provisions in I.A, I.B, and II.A. These changes do not require prior approvals or modifications of the permit.]

5.6 SWMP Revisions Requiring a Permit Modification

The city shall not discontinue or decrease an existing control measure (including an amount, frequency, timeframe, or any other measurable goal specified in Appendix A) without prior modification of this permit. Such modifications shall be proposed by the city in writing as a request for permit modification and shall describe how the proposed change will continue to achieve an equivalent reduction in pollutants and will not cause or contribute to a violation of any applicable surface water quality standard. In addition, a request for permit modification shall include the following information:

1. A description of the control measure to be eliminated or reduced;
2. An explanation of why the control measure should be eliminated or reduced;
3. An analysis of how the goals of the existing control measure is expected to be achieved once the practice is eliminated or reduced; and
4. An explanation of how the SWMP will continue to reduce discharges of pollutants, to the MEP, with the elimination or reduction of the control measure.

5.7 Program Modification Required by ADEQ

ADEQ may require changes to the SWMP as needed to:

1. Address impacts on water quality caused, or contributed to, by discharges from the MS4;
2. Include more stringent requirements necessary to comply with new state or federal statutory or regulatory requirements; or
3. Include such other conditions deemed necessary by the director to comply with the goals and requirements of the Clean Water Act.

Changes required by ADEQ shall be made in writing, shall set forth the time schedule for Tucson to develop the changes, and shall offer the city the opportunity to propose alternative program changes to meet the objective of the modification. All changes required

by ADEQ shall be made in accordance with the provisions in R18-9-B906 and 40 CFR 122.62.

6.0 SPECIAL CONDITIONS

6.1 Discharges from the MS4 to Impaired Waters

This permit is intended to improve and protect the impaired waters within the State of Arizona as specified in Arizona's 303(d) and other impaired water list(s). The city shall develop and implement control measures to minimize the discharge of any 303(d) listed parameters from the MS4 to an impaired water. These control measures shall be clearly identified in the city's SWMP.

Tucson shall also include any listed pollutant(s) in the stormwater monitoring performed at any outfall(s) discharging to an impaired water, as required by Section 7.3.3 of this permit. Monitoring for listed pollutants shall be performed throughout the permit term at the outfall(s) discharging to the impaired water (*this provision does not require fish tissue monitoring.*)

6.2 Total Maximum Daily Load (TMDL) Allocations

At the time of permit issuance, a Total Maximum Daily Load (TMDL) has been established for Lakeside Lake, a public park feature and recreational fishery. The TMDL establishes a wasteload allocation (WLA) for discharges of ortho-phosphorous to Lakeside Lake. Tucson shall implement appropriate control measures, including BMPs, to reduce the discharge of phosphorus to Lakeside Lake. Stormwater discharged to the lake shall be monitored for othro-phosphorus, total phosphorus and total nitrogen (nitrate/nitrate and TKN (including ammonia) as N) at least two (2) times during the fist year of the permit. Effectiveness of the control measures shall be evaluated by comparing the phosphorus loads in the stormwater with the WLAs in the TMDL. The target value for ortho-phosphorus based on the WLA in the TMDL is 0.139 lbs/day minus the load contributed by the added groundwater.

Tucson shall include stormwater monitoring results and the assessment of the effectiveness of control measures in meeting waste load allocations or load allocations associated with the TMDL in the Annual Report.

The Lakeside Lake monitoring required under section 6.2 is separate and apart from seasonal stormwater sampling requirements in section 7.3.3.

If another TMDL is established during the permit term, this permit may be reopened and modified to include the requirements of the TMDL and associated implementation plan in accordance with reopening and modification provisions in R18-9-B906 and 40 CFR 122.62.

6.3 Discharges from the MS4 to Outstanding Arizona Waters (OAW)

This permit is intended to preserve and protect outstanding Arizona waters. At the time of permit issuance, no water of the U.S. receiving discharges from the MS4 has been classified as an OAW. However, if a water of the U.S that has the potential to be impacted by the MS4 discharge is classified as a OAW during the permit term, this permit may be reopened and modified, in accordance with R18-9-B906 and 40 CFR 122.62, to include additional conditions to ensure that the OAW is adequately protected.

7.0 MONITORING REQUIREMENTS

7.1 Monitoring Objectives

The city shall conduct stormwater monitoring as required by this permit. Stormwater sampling data shall be used, at a minimum, for the following purposes:

A. To characterize stormwater quality and identify stormwater pollutants;
B. To detect and eliminate illicit discharges;
C. To evaluate the general effectiveness of specific control measures and the SWMP as a whole in reducing the discharge of pollutants; and
D. To estimate pollutant loads to waters of the U.S.

7.2. Dry Weather Screening

The city shall continue to implement an ongoing program to monitor major outfalls and field screening points for illicit discharges. The program shall implement the practices and measurable goals specified in Appendix A. The city shall perform outfall inspections in accordance with field screening procedures set forth at 40 CFR 122.26(d)(1)(iv)(D), and other applicable monitoring procedures.

7.3 Wet Weather Monitoring

7.3.1 Measurable Storm Events

Tucson shall conduct wet weather monitoring for storm events of 0.1 inches (or greater) that result in an actual discharge from the locations identified in Table 1. Discrete sampling events for each location shall not be less than 72 hours since the last storm event discharge.

7.3.2 Storm Event Records

Each season Tucson shall record measurable storm events occurring at each sampling station specified in Table 1 of this permit until all samples required to be to be collected during the season are obtained from the outfall. The permittee shall report this storm event data in the annual report and include, at a minimum, the following information:

1. Date of each storm event;
2. Amount of rainfall (in inches) in the drainage area for each stormwater monitoring location; and
3. For those storm events producing 0.10 inches of rainfall or greater, indication of whether or not a stormwater sample was collected, and if not, a brief explanation on the conditions that prevented or did not require sampling.

7.3.3 Seasonal Stormwater Sampling

The city shall sample stormwater discharging from the MS4 at the locations specified in Table 1 throughout the permit term. Stormwater sampling shall commence (as specified in Section 7.3.1) in winter wet season 2011. Stormwater sampling shall continue each subsequent wet season as necessary to collect at least one (1) stormwater sample from a measurable storm event from each monitoring location specified in Table 1. The city shall ensure that wet weather samples are representative of stormwater discharges and do not contain quantities

and concentrations of pollutants resulting from dry weather flow that would significantly alter stormwater samples.

Wet seasons, for the purposes of monitoring, shall be defined as follows:

Summer wet season: June 1 – October 31
Winter wet season: November 1 – May 31

Stormwater samples shall be collected at the frequencies specified in Table 2 (once each wet season; either every year or every other year of the permit, see Table 2). Sampling shall be conducted over the first three (3) hours of the discharge, or for the entire discharge period if the discharge lasts less than three (3) hours. The city shall design stormwater sampling procedures to include the "first flush" (first 30 minutes of storm water discharge) of a representative storm event whenever possible to do so.

In addition to seasonal stormwater sampling in this section, the city must also conduct monitoring at Lakeside Lake in accordance with section 6.2 of this permit.

Table 1
Monitoring Locations

Sampler Name	Sampler Location	Lat/Long	Watershed	Location Description
1	2295 E. Grant Rd. (E. of Wilson and N. of Grant)	32° 15' 02.83" 110° 56' 15.23"	Flowing Wells Wash Watershed	Single Family Residential
2	4396 E. Greenlee Rd. (E. of Columbus and S. of Greenlee)	32° 16' 14.9" 110° 53' 56.88"	Tucson Arroyo Watershed	Multi-family Residential
3	110 S. Randolph Way (SE of Broadway at Randolph Way)	32° 13' 16.16" 110° 55' 04.77"	Tucson Arroyo Watershed	Commercial
4	1005 E. 17th St. (E. of Fremont Ave.)	32° 12' 48.33" 110° 57' 12.33"	Creekside Wash Watershed	Industrial
5	698 E. Limberlost Rd. (SW 1st Ave at Limberlost)	32° 16' 58.28" 110° 57' 40.35"	Stone Avenue Wash Watershed	Mixed Use

TABLE 2 Stormwater Monitoring		
Parameter [1]	**Sampling Frequency** [4]	**Sample Type** [6]
Conventional Parameters		
Average flow rate for the sampling period [3]	Each time an outfall is sampled	_____
pH	Once each wet season for each year in the permit term beginning Winter Wet Season 2011	Discrete (field analysis)
Temperature	" "	Discrete (field analysis)
Hardness	" "	Flow-proportional composite
Total Dissolved Solids (TDS) (mg/L) [2]	" "	" "
Total Suspended Solids (TSS) (mg/L) [2]	" "	" "
Biochemical Oxygen Demand (BOD) (mg/L) [2]	" "	" "
Chemical Oxygen Demand (COD) (mg/L) [2]	" "	" "
Microbiological		
Escherichia coli (*E. coli*) (CFU/100 ml or MPN) [2]	" "	Discrete
Inorganics		
Cyanide, total (ug/L) [2]	" "	Discrete
Metals (ug/L) [2, 5]		
Antimony	" "	Flow-proportional composite
Arsenic	" "	" "
Barium	" "	" "
Beryllium	" "	" "
Cadmium	" "	" "
Chromium	" "	" "
Copper	" "	" "
Lead	" "	" "
Mercury	" "	" "
Nickel	" "	" "
Selenium	" "	" "
Silver	" "	" "
Thallium	" "	" "
Zinc	" "	" "

Nutrients (mg/L) [2]		
Nitrate plus Nitrite as N	" "	Flow-proportional composite
Ammonia as N	" "	" "
Total Kjeldahl Nitrogen (TKN) as N	" "	" "
Total Phosphorus	" "	" "
Orthophosphate (Total)	" "	" "
Organic Toxic Pollutants		
Total Petroleum Hydrocarbons (TPH) (mg/L)	" "	Discrete
Total Oil and Grease (mg/L) [2]	" "	Discrete

Volatile Organic Compounds (VOCs), Semi-VOCs, and Pesticides (ug/L) [2]

Parameter [1]	Sampling Frequency [4]	Sample Type [6]
Volatile Organics (ug/L) [2, 7]		
Acrolein	Once each wet season every other year of this permit beginning Winter Wet Season 2011	Discrete
Acrylonitrile	" "	" "
Benzene	" "	" "
Bromoform	" "	" "
Carbon tetrachloride	" "	" "
Chlorobenzene	" "	" "
Chlorodibromomethane	" "	" "
Chloroethane	" "	" "
2-chloroethylvinyl ether	" "	" "
Chloroform	" "	" "
Dichlorobromomethane	" "	" "
1,2-dichlorobenzene	" "	" "
1,3-dichlorobenzene	" "	" "
1,4-dichlorobenzene	" "	" "
1,1-dichloroethane	" "	" "
1,2-dichloroethane	" "	" "
1,1-dichloroethylene	" "	" "
1,2-dichloropropane	" "	" "
1,3-dichloropropylene	" "	" "
Ethylbenzene	" "	" "
Methyl bromide	" "	" "
Methyl chloride	" "	" "
Methylene chloride	" "	" "
1,1,2,2-tetrachloroethane	" "	" "

Tetrachloroethylene	" "	" "
Toluene	" "	" "
1,2-trans-dichloroethylene	" "	" "
1,1,1-trichloroethane	" "	" "
1,1,2-trichloroethane	" "	" "
Trichloroethylene	" "	" "
Trimethylbenzene	" "	" "
Vinyl chloride	" "	" "
Xylene	" "	" "
SVOCs - Acid Extractables (ug/L) [2, 7]		
2-chlorophenol	" "	Flow-proportional composite
2,4-dichlorophenol	" "	" "
2,4-dimethylphenol	" "	" "
4,6-dinitro-o-cresol	" "	" "
2,4-dinitrophenol	" "	" "
2-nitrophenol	" "	" "
4-nitrophenol	" "	" "
p-chloro-m-cresol	" "	" "
Pentachlorophenol	" "	" "
Phenol	" "	" "
2,4,6-trichlorophenol	" "	" "
SVOCs - Bases/Neutrals (ug/L) [2, 7]		
Acenaphthene	" "	Flow-proportional composite
Acenaphthylene	" "	" "
Anthracene	" "	" "
Benz(a)anthracene	" "	" "
Benzo(a)pyrene	" "	" "
Benzo(b)fluoranthene	" "	" "
Benzo(g,h,i)perylene	" "	" "
Benzo(k)fluoranthene	" "	" "
Chrysene	" "	" "
Dibenzo(a,h)anthracene	" "	" "
3,3'-dichlorobenzidine	" "	" "
Diethyl phthalate	" "	" "
Dimethyl phthalate	" "	" "
Di-n-butyl phthalate	" "	" "
2,4-dinitrotoluene	" "	" "
2,6-dinitrotoluene	" "	" "
Di-n-octyl phthalate	" "	" "
1,2-diphenylhydrazine (as azobenzene)	" "	" "
Fluroranthene	" "	" "

Fluorene	" "	" "
Hexachlorobenzene	" "	" "
Hexachlorobutadiene	" "	" "
Hexachlorocyclopentadiene	" "	" "
Hexachloroethane	" "	" "
Indeno(1,2,3-cd)pyrene	" "	" "
Isophorone	" "	" "
Naphthalene	" "	" "
Nitrobenzene	" "	" "
N-nitrosodimethylamine	" "	" "
N-nitrosodi-n-propylamine	" "	" "
N-nitrosodiphenylamine	" "	" "
Phenanthrene	" "	" "
Pyrene	" "	" "
1,2,4-trichlorobenzene	" "	" "
PCB / Pesticides (ug/L) [2, 7]		
Aldrin	" "	Flow-proportional composite
Alpha-BHC	" "	" "
Beta-BHC	" "	" "
Gamma-BHC	" "	" "
Delta-BHC	" "	" "
Chlordane	" "	" "
4,4'-DDT	" "	" "
4,4'-DDE	" "	" "
4,4'-DDD	" "	" "
Dieldrin	" "	" "
Alpha-endosulfan	" "	" "
Beta-endosulfan	" "	" "
Endosulfan sulfate	" "	" "
Endrin	" "	" "
Endrin aldehyde	" "	" "
Heptachlor	" "	" "
Heptachlor epoxide	" "	" "
PCB-1242	" "	" "
PCB-1254	" "	" "
PCB-1221	" "	" "
PCB-1232	" "	" "
PCB-1248	" "	" "
PCB-1260	" "	" "
PCB-1016	" "	" "
Toxaphene	" "	" "

Footnotes to Table 2- continued on next page

1 The city shall include any additional parameters in seasonal storm water sampling as required by Section 6.0 of this permit (Special Conditions).

2 Analytical results shall be reported in the units specified for each category or parameter.

3 Determine the average flow rate for the sampling period (no more than three (3) hours). In addition to average flow rate, the city shall also record the duration of the sampling period, the volume of flow over the sampling period, and all other monitoring information as specified in Section 7.6 of this permit (Monitoring Records).

4 Sampling Frequency: The sampling frequency for conventional parameters, cyanide, nutrients, Escherichia coli (*E. coli*), TPH, oil and grease, and metals is once each season for each year in the permit term at each monitoring location (outfall). The sampling frequency for VOCs, semi-VOCs, and pesticides is once each season for every other year of the permit beginning Winter Wet Season 2011.

5 If analyzing for total metals, the city shall assume a 1:1 total to dissolved ratio for purposes of reporting and comparison with surface water quality standards (SWQS) unless a site specific translator study is performed. Alternatively, the city may test for dissolved metals, if appropriate field filtering is completed. Hardness data must also be collected and used to calculate the corresponding SWQS for certain metals as indicated by the Surface Water Quality Standards rules.

6 Sample Type: Discrete samples shall be collected manually for pH, temperature, cyanide, oil and grease, TPH, *E. coli*, and VOCs. Flow-proportional composite samples shall be collected for all other parameters specified in Table 2. A flow-proportional composite sample may be collected with a continuous sampler or as a combination of multiple discrete samples (aliquots). Only one (1) analysis of the composite of aliquots is required. Regardless of the sample type, the city shall attempt to include the "first flush" (first 30 minutes of stormwater discharge) of a representative storm event whenever possible to do so.

7 Methods: These parameters may be run using the following methods: VOCs, 624 or 8260; SVOCs 625, or 8270; and PCB / Pesticides, 608/625 or 8081/8082 if the laboratory can pass quality assurance (QA) with the method. In this case, the data should be marked with a T2 flag.

7.4 Assessment of Pollutant Loadings

Tucson shall estimate the pollutant loadings each year from each monitored outfalls to waters of the U.S. for BOD, COD, TSS, total dissolved solids, total nitrogen, total ammonia plus total organic nitrogen (TKN), total phosphorous, and metals. An event mean concentration of each pollutant shall be estimated using representative storm event data for each year. The city shall estimate the annual (total) pollutant loadings from the MS4 to waters of the U.S. each year. Pollutant loadings and event mean concentrations may be estimated from sampling data collected at the representative monitoring locations and shall take into consideration land uses and drainage areas for the outfall. The pollutant loadings estimated each year shall be compared to previous estimates of pollutant loadings throughout this permit term. Estimates of pollutant loadings and event mean concentrations shall be included in the annual report and shall be accompanied by a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis, and calculation methods.

7.5 Sample Collection and Analysis

7.5.1 The city is responsible for the quality and accuracy of all data required under this permit.

7.5.2 Quality Assurance (QA) Manual

Within one year of the effective date of this permit, the city shall develop and implement a Quality Assurance (QA) manual that describes sample collection and analyses processes. If the city collects samples or conducts sample analyses in-house, the city shall develop a QA manual that addresses these activities. If a third party collects and/or analyzes samples on behalf of Tucson, the city shall obtain a copy of the applicable QA procedures. The QA manual shall be available for review by ADEQ/ADHS upon request. The QA manual shall be updated as necessary and shall describe the following:

1. Project management including roles and responsibilities of the participants; qualifications of persons collecting samples; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; and applicable permit-specific limits, assessment levels or thresholds;

2. Sample collection procedures; equipment used; the type and number of samples to be collected including QA/QC (quality assurance/quality control) samples (i.e., background samples, duplicates, and equipment or field blanks); preservatives and holding times for the samples (see methods under 40 CFR 136 or Title 9, Chapter 14, Article 6 or any condition within this permit that specifies a particular test method);

3. Approved analytical method(s) to be used; Limits of Detection (LODs) and Limits of Quantitation (LOQs); required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken by the city or the laboratory as a result of problems identified during QC checks; and

4. How the city will perform data review; report results to ADEQ; resolve data quality issues; and identify limitations on the use of the data.

7.5.3 Sample Collection

Sample collection, preservation and handling shall be performed as described in 40 CFR 136 including the referenced edition(s) of *Standard Methods for the Examination of Water and Wastewater*, or by procedures referenced in A.R.S Title 9, Chapter 14 of the ADHS laboratory licensure rules. Tucson shall describe the proper procedures in the QA manual and samples taken for this permit must conform to procedures required and documented in Section 7.5.2.2 whether collection and handling is performed directly by the city or contracted to another party.

7.5.4 Analyses Requirements

1. The city must use a laboratory that is licensed by the ADHS Office of Laboratory Licensure and Certification. Sample analyses conducted in the field at the time of collection (e.g., temperature, pH, etc.) may be performed by the city (including contractors retained by Tucson) utilizing instruments appropriate for the analyses or measurement. Field instruments must be calibrated and maintained according to the manufacturer's specifications. Where such a procedure exists, field analyses shall be conducted in accordance with procedures established in 40 CFR 136. To ensure

consistency, the city shall prepare Standard Operating Procedures (SOPs) for all analyses conducted in the field, whether or not a procedure is established in 40 CFR 136. Copies of the SOPs shall be included in the first annual report submitted to ADEQ and retained in the QA manual.

2. The city must use analytical methods specified in this permit. If no test procedure is specified, the city shall analyze the pollutant using:

   a. A test procedure listed in 40 CFR 136;
   b. An alternative test procedure approved by the EPA as provided in 40 CFR 136;
   c. A test procedure listed in 40 CFR 136, with modifications allowed by EPA and approved as a method alteration by ADHS under A.A.C. R9-14-610(C); or
   d. If no test procedure for a pollutant is available under (2)(a) through (c) above, any method in A.A.C. R9-14-612 or approved under A.A.C. R9-14-610(C) for wastewater may be used. If there is no approved wastewater method for a parameter, any other method identified in 9 A.A.C. 14, Article 6 that will achieve appropriate detection and reporting limits may be used for analyses.

3. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods.

4. The city shall use an analytical method with a Limit of Quantitation (LOQ) that is lower than the water quality criteria applicable to the waters of the U.S. which receive stormwater discharges. If all methods have LOQs higher than applicable water quality criteria, the city shall use the approved analytical method with the lowest LOQ.

5. The city shall use a standard calibration where the lowest standard point is equal to or less than the LOQ[3].

7.6 Monitoring Records

The city shall retain records of monitoring activities, including the following information applicable to the sampling event and equipment type:

1. Date and time of sampling or measurements performed;
2. Monitoring location (outfall identification);
3. Individual(s) who performed the sampling or measurements;
4. Duration of the sampling period;
5. Volume of flow during the sampling period;
6. Volume of each discrete and flow-weighted composite sample;
7. Volume of each aliquot in the flow-weighted composite sample;
8. Flow rate at the time of collection of each aliquot;
9. Number of aliquots in the flow-weighted composite sample;
10. Time interval between collection of each aliquot (or time of collection of each aliquot);
11. Sample preservatives used;
12. Date(s) the analyses were performed;
13. Laboratory and individual(s) who performed the analyses;

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[3] In those cases where methods utilize a single point calibration, such as 200.7 for metals, the permittee should request the laboratory to provide the lowest concentration for each analyte over which the instrument response is linear. The linear dynamic range for the method should be established as part of the required QA/QC procedures.

14. Analytical techniques or methods used;
15. Published Method Detection Limit (MDL) of each method used, as applicable;
16. Limits of Detection (LODs) of each method used;
17. Results of such analyses;
18. Completed chain of custody forms;
19. Any comments, case narrative or summary of results produced by the laboratory required to be supplied to the city by the laboratory under ADHS licensure rules; and
20. Summary of data interpretation and any corrective action related to the data taken by Tucson.

7.7 Retention of Monitoring Records

The city shall retain records of all monitoring information including all calibration and maintenance records for field equipment or meters operated by the city, copies of all reports required by this permit, and records of all data use for a period of at least five (5) years from the date of the sample, measurement or report.

7.8 Sampling Waiver

Sampling of a representative event is not required during adverse climatic conditions. Adverse climatic conditions which prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, electrical storms, etc.). Information on the conditions that prevented sampling as required by Section 7.3. of this permit shall be reported to ADEQ in the annual report. The city shall continue to monitor subsequent storm events during the monitoring season and perform storm water sampling of a representative storm event if another occurs during the same wet season.

7.9 Changes to the Monitoring Program by the City

Tucson may increase the number of monitoring locations, sampling frequencies, or number of monitoring parameters specified in this permit at any time during the life of the permit without submitting a request for permit modification from ADEQ. The city may also cease any additional monitoring not specified in this permit at any time without submitting a request for permit modification from ADEQ. A description of these change(s) to the monitoring program, including corresponding analytical results, shall be included in the subsequent annual report required by Section 8.1 of this permit.

Tucson shall not decrease or replace a monitoring requirement specified in this permit including monitoring locations, sampling frequencies, or monitoring parameters, without modifying this permit. Changes to the monitoring requirements specified in this permit shall be proposed by the city in writing as a request for permit modification. A proposal for permit modification to change a monitoring requirement shall include the following information:

1. A description of the monitoring requirement to be reduced or replaced;
2. An explanation of why the monitoring requirement should be reduced or replaced;
3. A description of the proposed change to the monitoring requirement;
4. An explanation of how the proposed change will affect the monitoring program; and
5. An analysis of how the proposed change will continue to achieve the goals of the monitoring program with the reduction or replacement of the monitoring requirement.

7.10 Modification to Monitoring Program Required by ADEQ

ADEQ may require changes to the monitoring program to:

1. Assess impacts on receiving water quality caused or contributed to by discharges from the MS4 to waters of the U.S.; or
2. Include more stringent requirements necessary to comply with new state or federal statutory or regulatory requirements.

Changes required by ADEQ shall be made in writing, shall set forth the time schedule for the city to develop the changes, and shall offer Tucson the opportunity to propose alternative changes to meet the objective of the modification. All changes required by ADEQ shall be made in accordance with R18-9-B906 and 40 CFR 122.62.

7.11 Compliance with Monitoring Requirements

Tucson shall implement and comply with all of the monitoring requirements specified in Section 7.0 of this permit. Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which includes the possibility of fines and/or imprisonment.

8.0 REPORTING REQUIREMENTS

8.1 Annual Reporting

8.1.1 All Annual Reports

The city shall prepare an annual report summarizing the progress of the SWMP and the findings of monitoring activities for each year of the permit term. The annual report shall be submitted to the Stormwater and General Permits Unit, Surface Water Section each year as specified in Sections 8.5 and 8.6 which follow. The permittee shall complete the annual report form (ARF), as attached in Appendix B of this permit, consisting of the following information:

1. General Information, including:
   Name of Permittee (legal entity); existing MS4 permit number; name, title, mailing address, telephone and fax number, and email address of the stormwater program contact person; and name, title, mailing address, telephone and fax number, and email address of the municipal or county official that is signing and certifying the renewal application;
2. Report Certification;
3. Summary of Stormwater Management Program Activities (narrative);
4. Summary of Stormwater Management Program Activities (numeric);
5. Evaluation of the Stormwater Management Program;
6. Stormwater Management Program Modifications;
7. Monitoring Locations;
8. Storm Event Records;
9. Summary of Monitoring Data;
10. Copies of Laboratory Analytical Reports;
11. Assessment of Monitoring Data (also see Section 8.3 of this permit - Discharge of Pollutants above a Surface Water Quality Standard);
12. Estimate of Pollutant Loadings;
13. Annual Expenditures; and
14. Attachments.

When the city is unable to collect storm water samples, as required by Section 7.3 of this permit, due to adverse climatic conditions, the city shall submit in the annual report, in lieu of sampling data, a description of the conditions that prevented sampling, including documentation of the storm event.

8.1.2 The 4th Year Annual Report.

In addition to the information in Section 8.1.1, the 4th year submittal shall be expanded to include the following provisions. This comprehensive document shall serve as the renewal application for the city.

1. Waters of the U.S. - Identification of waters of the U.S. that may receive discharges from the MS4. Include a brief description of the designated uses of each water of the U.S. and any known water quality impairments or total maximum daily loads (TMDLs) for those waters, or designation of any such water as an outstanding Arizona water resource.

2. Mapping - An up-to-date map or map(s) showing MS4 boundaries, locations where Tucson's storm sewer discharges to waters of the U.S., locations where Tucson's storm sewer system discharges to a storm sewer system owned and operated by another party, and wet weather stormwater monitoring location(s) and the associated drainage basins

3. Rain Gauges - Identification of the location of rain gauges in the vicinity of the wet weather monitoring locations with approximate longitude and latitude for each rain gauge.

4. Discharge Characterization Data - Summary of stormwater quality monitoring data based on all sampling results obtained during the permit term. Provide an evaluation of the quality of stormwater discharges from the MS4, including a discussion on the detection and non-detection of specific pollutants. Include an assessment of any trends, improvements, or degradation of stormwater quality discharges from the MS4.

5. Pollutant Loads - Summary of the annual (or seasonal) pollutant loadings for detected pollutants in stormwater discharges from the MS4.

6. Updated SWMP - A copy of the current updated SWMP and associated attachments in Section 5.3 and Appendix C of this permit.

7. Any proposed modifications to the monitoring program - If changes are proposed to the stormwater monitoring program (such as changes to monitoring locations, parameters, or frequency), identify those and include a brief discussion on the reason(s) for modification.

8. Modifications to the SWMP - Summary of changes made to the SWMP during the permit term, including any addition or replacement of control measures.

9. Proposed Modifications to the SWMP - If changes to the SWMP are proposed for the next permit term, identify those and include a brief discussion on the reasons for modification.

10. Fiscal Analysis - Brief description of the funding sources used to support MS4 SWMP expenditures.

11. Low Impact Development (LID) - Summary of evaluation conducted on the feasibility and benefits of implementing an expanded LID program; including anticipated changes to existing codes, estimation of associated cost, identifying where LID can be implemented with new construction and significant redevelopment projects.

8.2 Non-filer Notifications

Tucson shall notify the department of any construction or industrial activities that are known to be occurring without AZPDES authorization to discharge stormwater associated with those activities (i.e., non-filers). Information shall be reported to the Unit Manager, Field Services Unit, Water Quality Compliance Section periodically, but at least semi-annually.

1. For construction activities that are known by the city to be occurring without ADEQ's Notice of Intent (NOI) authorization, for permit coverage under the AZPDES Construction General Permit, provide the project name and address, and operator name and contact information, if known. Non-filers do not include operators that have received written acknowledgment of a permit waiver certification form from ADEQ.

2. For industrial activities that are known by the city to be occurring without ADEQ's required NOI authorization for permit coverage under the Multi-Sector General Permit (MSGP), or other general or individual NPDES permit for stormwater discharges associated with industrial activity, provide the facility name and address, SIC (Standard Industrial) code, business owner or operator, and contact information, if known. Non-filers do not include operators that have received written acknowledgment of a No Exposure Certification form from ADEQ.

Notification of non-filers shall be in writing and may be submitted by mail, hand delivery, electronic submittal, e-mail or facsimile. This requirement is not considered subject to the signatory and certification requirements of Sections 9.2 and 9.12.

8.3 Discharge of a Pollutant Above a Surface Water Quality Standard

If Tucson detects a discharge that contains a concentration of a pollutant above an applicable surface water quality standard on a recurring basis, the city shall report this information in the annual report as required by Section 4.3 of this permit. The report shall include, at a minimum:

1. Sampling dates;
2. Monitoring location (outfall identification number);
3. Waters of the U.S. that received the discharge and surface water quality standard (SWQS) which was exceeded;
4. Monitoring results (laboratory reports);
5. A description of the efforts to investigate and identify the sources of the pollutant(s), and circumstances that may have caused or contributed to high pollutant levels;
6. Proposed further actions, which may include revisions to the SWMP consisting of additional and/or revised control measures to reduce or eliminate the pollutant(s) or source(s) to the maximum extent practicable; and
7. If applicable, a schedule for implementing the proposed stormwater or non-stormwater control measures.

8.4 Additional Reporting Requirements

Tucson shall comply with all additional reporting requirements specified in Section 9.0 (Standard Conditions) of this permit, including the following conditions:

Planned Changes	9.13 (1)
Anticipated Noncompliance	9.13 (1)
Transfers	9.13 (2)
Monitoring Reports	9.13 (3)
Compliance Schedules	9.13 (4)
24-Hour Reporting	9.13 (5)
Other Noncompliance	9.13 (6)
Other Information	9.13 (7)
Availability of Reports	9.18

8.5 Reporting Deadline

Annual reports are due on September 30th of each year.

8.6 Reporting Locations

24-hour reporting requirements specified in Section 9.13 of this permit shall be made to:

ADEQ's 24-Hour Hotline (602) 771-2330

ADEQ Water Quality Compliance Manager (602) 771-2209

All documents (annual reports, SWMPs, renewal application) required by this permit to be submitted to ADEQ Surface Water Section shall be directed to:

ADEQ - Surface Water Section
Storm Water and General Permits Unit
Mail Code: 5415A-1
1110 West Washington Street
Phoenix, AZ 85007
Phone (602) 771-4508

All documents (AZPDES Non-filer reports) required by this permit to be submitted to ADEQ Water Quality Compliance Section shall be directed to:

ADEQ - Water Quality Compliance Section
Field Services Unit Manager
Mail Code: 5415B-1
1110 West Washington Street
Phoenix, AZ 85007
Phone (602) 771-4612

8.7 Signatory and Certification Requirements

All applications, reports or information submitted to ADEQ shall be signed and certified in accordance with Sections 9.12 (Signatory Requirements) of this permit, except as specifically provided in Section 8.2.

9.0 STANDARD CONDITIONS

9.1 Duty to Reapply

[A.A.C. R18-9-B904(B)] The city shall submit the information required for renewal at least 180 days before this permit expires.

9.2 Signatories to Applications or Reports

[A.A.C. R18-9-A905 (A) (1) (c) incorporates by reference 40 CFR 122.22]

1. All permit applications for a municipality, state, federal, or other public agency shall be signed by either a principal executive officer or ranking elected official.

2. Reports and Other Information
   All reports required by this permit and other information requested by ADEQ shall be signed by a person described in Subsection 9.2.1 of this Section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   (a) The authorization is made in writing by a person described in 9.2.1;
   (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and
   (c) The written authorization is submitted to ADEQ.

3. Changes to Authorization
   If an authorization under subsection 9.2.2. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of 9.2.2. of this section must be submitted to ADEQ prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification
   Any person signing a document under Subsection 9.2.1 or 9.2.2 of this section shall make the following certification:

   I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

9.3 Duty to Comply

[A.A.C. R18-9-A905 (A)(3)(a) which incorporates 40 CFR 122.41(a)(1) and A.R.S. §§ 49-262, 263.01]

1. Tucson shall comply with all conditions of this permit and any standard and prohibition required under A.R.S. Title 49, Chapter 2, Article 3.1 and A.A.C. Title 18, Chapter 9, Article 9. Any permit noncompliance constitutes a violation of the Clean Water Act; A.R.S. Title 49, Chapter 2, Article 3.1; and A.A.C. Title 18, Chapter 9, Articles 9 and 10, and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or denial of a permit renewal application.

2. The issuance of this permit does not waive any federal, state, county, or local regulations or permit requirements with which a person discharging under this permit is required to comply.

3. Tucson shall comply with the effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulation that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. **Civil Penalties**: A.R.S. § 49-262(C) provides that any person who violates any provision of A.R.S. Title 49, Chapter 2, Article 2, 3 or 3.1 or a rule, permit, discharge limitation or order issued or adopted under A.R.S. Title 49, Chapter 2, Article 4 is subject to a civil penalty not to exceed $25,000 per day per violation.

5. **Criminal Penalties**: Any person who violates a condition of this permit, or violates a provision under A.R.S. Title 49, Chapter 2, Article 3.1, or A.A.C. Title 18, Chapter 9, Article 9 is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which may include the possibility of fines and/or imprisonment.

9.4 Need to Halt or Reduce Activity Not a Defense

[A.A.C. R18-9-A905(A)(3) (a) incorporates by reference 40 CFR 122.41(c)]
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

9.5 Duty to Mitigate

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(d)]
Tucson shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

9.6 Proper Operation and Maintenance

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(e)]
Tucson shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the city to achieve compliance with the conditions of this permit and the city's SWMP. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a city only when the operation is necessary to achieve compliance with the conditions of the permit.

9.7 Permit Actions

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(f)]

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

9.8 Property Rights

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(g)]
This permit does not convey any property rights of any sort, or any exclusive privilege nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, Indian tribe, or local laws or regulations.

9.9 Duty to Provide Information

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(h)]
Tucson shall furnish to ADEQ, within a reasonable time, any information which ADEQ may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The city shall also furnish to ADEQ upon request, copies of records required to be kept by this permit.

9.10 Inspection and Entry

[A.R.S. §41-1009; A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(i)]
Tucson shall allow ADEQ, or an authorized representative, upon the presentation of credentials and such other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the terms of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring or control equipment), practices or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, A.R.S. Title 49, Chapter 2, Article 3.1, and A.A.C. Title 18, Chapter 9, Article 9, any substances or parameters at any location.

9.11 Monitoring and Records

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(j)]
Refer to Section 7.0 of this permit for monitoring requirements.

9.12 Signatory Requirement

[A.A.C. R18-9-A905(A)(3)(a) incorporates by reference 40 CFR 122.41(k)]

1. All applications, reports or information submitted to ADEQ shall be signed and certified. (See 40 CFR 122.22 incorporated by reference at R18-9-A905[A][(1][c])

2. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than $20,000 per day of violation, or imprisonment of not more than four (4) years, or both. [Updated pursuant to the Water Quality Act of 1987]

9.13 Reporting Requirements

[A.A.C. R18-9-A905 (A)(3)(a) which incorporates 40 CFR 122.41(l)]

1. Anticipated Noncompliance
   Tucson shall give advance notice to ADEQ of any planned changes in the permitted facility of activity which may result in noncompliance with the permit requirements.

2. Transfers (A.A.C. R18-9-B905)
   This permit is not transferable to any person except after notice to ADEQ. ADEQ may require modification or revocation and reissuance of the permit to change the name of the city and incorporate such other requirements as may be necessary under Arizona Revised Statutes and the Clean Water Act.

3. Monitoring Reports
   Refer to Section 8.0 of this permit for reporting requirements.

4. Compliance Schedules
   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

5. Twenty-Four Hour Reporting
   Tucson shall orally report any noncompliance with this permit which may endanger the environment or human health within 24 hours from the time the city becomes aware of the event to ADEQ's 24-Hour Hotline at (602) 771-2330. The city shall also notify the appropriate regional Water Quality Compliance Manager by phone call or voice mail by 9 a.m. on the first business day following the noncompliance. (Refer to Section 8.6 for ADEQ contact information)

   Tucson shall also notify ADEQ Water Quality Compliance Section in writing within five (5) days of the noncompliance event. The city shall include in the written notification a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. Written reports shall be submitted to ADEQ Water Quality Compliance Section as specified in Section 8.6 of this permit.

6. Other Noncompliance
   Tucson shall report all instances of noncompliance not otherwise required to be reported under this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph five (5) of this subsection.

7. Other Information

Where the city becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to ADEQ, the city shall promptly submit such facts or information to ADEQ.

9.14 Bypass

[A.A.C. R18-9-A905 (A)(3)(a) incorporates by reference 40 CFR 122.41(m)]

1. Definitions
   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass not Exceeding Limitations
   Tucson may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs three (3) and four (4) of this subsection.

3. Notice
   a. Anticipated Bypass
      If the city knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.
   b. Unanticipated Bypass
      The city shall submit notice of an unanticipated bypass as required in paragraph five (5) of Subsection 9.13 (24-Hour Reporting).

4. Prohibition of Bypass
   a. Bypass is prohibited, and ADEQ may take enforcement action against a permittee for a bypass, unless:

      (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      (iii) The city submitted notices as required under paragraph three (3) of this subsection.

   b. ADEQ may approve an anticipated bypass, after considering its adverse effects, if ADEQ determines it will meet the three (3) conditions listed above in paragraph 4.a.

9.15 Upset

[A.R.S. §§ 49-255(8) and 255.01(E), A.A.C. R18-9-A905 (A)(3)(a) incorporates by reference 40 CFR 122.41(n)]

1. Definition
"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the city. Upset does not include noncompliance to the extent that it is caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

2. Effect of an Upset
An upset constitutes an affirmative defense to any administrative, civil or criminal enforcement action brought for noncompliance with such technology-based discharge limitations if all requirements of paragraph three (3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

3. Conditions Necessary for a Demonstration of Upset
A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   a. An upset occurred and that the city can identify the specific cause of the upset;
   b. The permitted facility was being properly operated at the time of the upset;
   c. The city submitted notice of the upset as required in paragraph 5, Subsection 9.13 (24-Hour Reporting);
   d. The city complied with any remedial measures required under 40 CFR 122.41(d); and
   e. The city has taken appropriate measure including all reasonable steps to minimize or prevent any discharge or sewage sludge use or disposal that is in violation of the permit and that has a reasonable likelihood of adversely affecting human health or the environment per A.R.S. § 49-255.01(E)(1)(d).

4. Burden of Proof
In any enforcement preceding the permittee seeking to establish the occurrence of an upset has the burden of proof.

9.16 Reopener Clause

[A.A.C. R18-9-B906, and R18-9-A905 incorporates by reference 40 CFR 122]
The permit may be reopened in accordance with the reopening and modification provisions in R18-9-B906 and 40 CFR 122.62 based on newly available information; to address statutory or regulatory changes that occur during the permit term; to include conditions or limits for toxic constituents determined to be present in the discharge; to address provisions of an applicable TMDL; or to implement any EPA-approved new Arizona surface water quality standard. Per 40 CFR 122.62, when a permit is modified, only the conditions subject to modification are reopened

9.17 Termination of Permits

[A.A.C. R18-9-B906(c) and 40 CFR 122.64]
The following are causes for terminating a permit during its term, or for denying a permit renewal application:

1. Noncompliance by the city with any condition of the permit;

2. Tucson's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the city's misrepresentation of any relevant facts at any time;
3. A determination by ADEQ that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
4. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit.

9.18 Availability of Reports

[Pursuant to A.R.S § 49-205 and Clean Water Act Section 308]
Except for data determined to be confidential under A.R.S. § 49-205(A), all records, reports or information prepared in accordance with the terms of this permit shall be made available to the public. In accordance with A.R.S. § 49-205(B) and (C), permit applications, permits, and effluent data shall be available to the public.

9.19 Removed Substances

[Pursuant to Clean Water Act Section 301]
Solids, sludges, filter backwash, or other pollutants removed in the course of maintenance of the MS4 shall be disposed of in a manner that prevents any pollutant from such materials from entering waters of the U.S. This provision is not intended to prevent the legitimate reuse or recycling of such materials in an environmentally responsible manner and as described in Tucson's SWMP.

9.20 Severability

[Pursuant to A.R.S. § 49-324(E) and Clean Water Act Section 512]
The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and remainder of the permit, shall not be affected thereby.

9.21 Civil and Criminal Liability

[Pursuant to A.R.S. §§ 49-262, 263.01, and 263.02 and Clean Water Act Section 309]
Except as provided in permit conditions on "Bypass" (Section 9.14) and "Upset" (Section 9.15), nothing in this permit shall be construed to relieve the city from civil or criminal penalties for noncompliance.

9.22 Oil and Hazardous Substance Liability

[Pursuant to Clean Water Act Section 311]
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the city from any responsibilities, liabilities, or penalties to which the city is or may be subject under Section 311 of the Clean Water Act.

9.23 State or Tribal Law

[Pursuant to A.A.C. R18-9-A904(c) and Clean Water Act Section 510]
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the operator from any legal action or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable state or tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

9.24 Other Environmental Laws

No condition of this permit releases the operator from any responsibility or requirements under other environmental statutes or regulations.

10.0 DEFINITIONS

Aliquot means a portion of a discrete sample used to produce a composite sample for analysis.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, structural and nonstructural controls, operational and maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States.

Composite Sample is a combined sample that is formed by combining a series of individual, discrete samples of specific volumes at specified intervals. Composite samples characterize the quality of a stormwater discharge over a longer period of time, such as the duration of a storm event. Although, these intervals can be time-weighted or flow-weighted, this permit requires the collection of flow-proportional composite samples. This means that samples are collected and combined using aliquots in proportion to flow rather than time. Also see Flow-Proportional Composite Sample and Flow-Weighted Composite Sample.

Construction Site means a location where construction activities (as defined in 40 CFR 122.26(b)(14)(x) and 40CFR 122.26(b)(15)) are ongoing and therefore the operator was required to obtain coverage under Arizona's Stormwater Construction General Permit.

Control Measure refers to any BMP, control technique and system, design and engineering method, and such other provisions to prevent or reduce the discharge of pollutants to waters of the United States to the maximum extent practicable.

CWA means the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500; 86 Stat.816; 33 United States Code sections 1251 through 1376), as amended. [A.R.S. § 49-201(6)]

De Minimis Discharge means a discharge that is a low flow and/or low frequency event of relatively pollutant free water which is discharged with appropriate control measures to reduce any pollutants to below the applicable surface water quality standards (18 A.A.C. 11, Article 1). De Minimis discharges to waters of the U.S. require permit coverage and shall not last for more than 30 days, unless approved in advance by the department.

Department means the Arizona Department of Environmental Quality.[A.R.S. § 49-201(9)]

Director means the director of the Arizona Department of Environmental Quality or the director's designee.

Discharge when used without qualification, means the "discharge of a pollutant."

Discharge of a Pollutant means any addition of any "pollutant" or combination of pollutants to "waters of the U.S." from any point source.

Discrete or Grab Sample means a discrete, individual sample collected from a single location within a short period of time (usually less than 15 minutes). Analysis of grab samples characterizes the quality of a discharge at a given time of the discharge.

Field Screening Point means a location other than an outfall, within a conveyance of a MS4 where either visual observation or sampling is performed.

Flow-Proportional Composite Sample is a sample that combines discrete samples collected over time, based on the flow of the discharge being sampled. There are two (2) methods used to collect this type of sample. One collects a constant sample volume at time intervals that vary based on stream flow. The other collects discrete samples that are proportioned into aliquots of varying volumes based on stream flow, at constant time intervals (i.e. flow-weighted composite sample).

Flow-Weighted Composite Sample means a composite sample consisting of a mixture of aliquots from discrete samples collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

Illicit Connection means pipes, drains, open channels and other conveyances that have the potential to allow an illicit discharge to enter the storm sewer system, including connections made in the past, whether or not the connection was permissible at the time.

Illicit Discharge means any discharge to a MS4 that is not composed entirely of stormwater except discharges pursuant to a NPDES or AZPDES permit (other than the NPDES or AZPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities. [40 CFR 122.26(b) (2)]

Impaired Water means a water of the U.S. that has been assessed by ADEQ, under the CWA, Section 303(d), as not attaining a surface water quality standard (SWQS) for at least one (1) designated use, and is listed in Arizona's 303(d) and other impaired water list(s).

Large Municipal Separate Storm Sewer System (MS4) means a municipal separate storm sewer that is either:

1. Located in an incorporated area with a population of 250,000 or more as determined by the 1990 Decennial Census by the Bureau of Census; or
2. Located in a county with an unincorporated urbanized area with a population of 250,000 or more, according to the 1990 Decennial Census by the Bureau of Census, but not a municipal separate storm sewer that is located in an incorporated place, township, or town within the county; or
3. Owned or operated by a municipality other than those described in (1) and (2) above, and that are designated by the director under A.A.C. R18-9-A902(D)(2) as part of the large municipal separate storm sewer system. [A.A.C. R18-9-A901 (16)]

Limit of Detection or LOD means an analyte- and matrix-specific estimate of the minimum amount of a substance that an analytical process can reliably detect, which may be laboratory dependent and is developed according to Arizona Administrative Code R9-14-615(C)(7).

Limit of Quantitation or LOQ means the minimum levels, concentrations, or quantities of a target variable such as an analyte that can be reported with a specific degree of confidence.

Major Outfall means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or from its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more). [40 CFR 122.26(b)

(5)]

Measurable Goal means a quantitative measure of progress in implementing a component of a stormwater management program.

Measurable Storm Event means a storm event of 0.1 inches (or more) that results in an actual discharge that follows preceding measurable storm event by at least 72 hours. The 72-hour storm event does not apply if you are able to document that less than a 72-hour interval is representative for local storm events during the sampling period.

Medium Municipal Separate Storm Sewer System (MS4) means a municipal separate storm sewer that is either:

a. Located in an incorporated area with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census; or
b. Located in a county with an unincorporated urbanized area with a population of 100,000 or more but less than 250,000 as determined by the 1990 Decennial Census by the Bureau of the Census; or
c. Owned or operated by a municipality other than those described in subsections (a) and (b) and that are designated by the director under A.A.C. R18-9-A902(D)(2) as part of the medium municipal separate storm sewer system. [A.A.C. R18-9-A901 (20)]

MS4 means municipal separate storm sewer system (Also see definitions for large and medium municipal separate storm sewer systems).

Municipal Separate Storm Sewer means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. Owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under Section 208 of the Clean Water Act (33 U.S.C. 1288) that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. That is not a combined sewer; and
4. That is not part of a Publicly Owned Treatment Works (POTW) as defined at A.R.S § 49-255.

Outfall means a point source (as defined by A.R.S. § 49-201) at the point where a municipal storm sewer discharges to waters of the United States, and does not include open conveyances connecting two (2) separate municipal storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

Outstanding Arizona Water means a water of the U.S. that has been designated by ADEQ as an outstanding state resource water by the director under A.A.C. R18-11-112.

Point Source means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged to waters of the U.S. Point source does not include return flows from irrigated

agriculture or agricultural storm water runoff. [40 CFR 122.2 & A.R.S. § 49-201(28)]

Pollutant means fluids, contaminants, toxic wastes, toxic pollutants, dredged spoil, solid waste, substances and chemicals, pesticides, herbicides, fertilizers and other agricultural chemicals, incinerator residue, sewage, garbage, sewage sludge, munitions, petroleum products, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and mining, industrial, municipal and agricultural wastes or any other liquid, solid, gaseous or hazardous substances. [A.R.S. § 49-201(29)]
Stormwater means stormwater runoff, snow melt runoff, and surface runoff and drainage. [A.A.C. R18-9-A901 (36)]

Stormwater Management Program (SWMP) means a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system. Stormwater Management Program (or Stormwater Management Plan) is also used to refer to the written document that describes a stormwater management program.

Waters of the United States (U.S.) means those waters as defined in 40 CFR 122.2.

11.0 REFERENCES

1. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2009, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

2. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2008, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

3. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2007, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

4. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2006, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

5. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2005, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

6. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2004, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

7.. *Municipal Separate Storm Sewer System, Annual Report Year Ending June 30, 2003, city of Tucson, Arizona, NPDES Permit No. AZS000001.*

8. *Municipal Separate Storm Sewer System, NPDES Permit No. AZS000001 Renewal Application*, dated September 14, 2001.

9. *National Pollutant Discharge Elimination System (NPDES) Permit for the City of Tucson MS4*, Permit No. AZS000001, dated February 14, 1997.

10. Arizona Administrative Code (A.A.C.) Title 18, Chapter 11, Article 1, *Water Quality Standards for Surface Waters,* adopted January 31, 2009.

11. A.A.C. Title 18, Chapter 9, Article 9. *Arizona Pollutant Discharge Elimination System* rules.

12. Code of Federal Regulations (CFR) Title 40, Part 122, *EPA administered permit programs: The National Pollutant Discharge Elimination System.*

13. *EPA's Municipal Separate Storm Sewer System Compliance Audit Report*, dated October 17, 2006.

14. *City of Tucson Comments to EPA's MS4 Compliance Audit Report*, dated December 18, 2006.

APPENDIX A

Stormwater Management Program (SWMP) - Measurable Goals

The city's Stormwater Management Program (SWMP) shall detail the approach and processes necessary to achieve the following measurable goals. The city shall keep systems in place and maintain records adequate to demonstrate compliance with Appendix A provisions. Where optional (i.e., 'menu') choices are provided, Tucson may choose between options during each specific year of the permit without modification of this permit. Progress on the following goals shall be reported each year in the annual report.

At a minimum, Tucson shall implement each of the following provisions:

I. PUBLIC EDUCATION AND OUTREACH

Tucson shall provide outreach and education to the general public on the stormwater program issues and requirements. The SWMP shall include details of the outreach strategy that shall run the full term of the permit.

A. Measurable Goal: At a minimum, provide public education and outreach to at least one (1) target group on one (1) or more of the topics listed below during each year of the permit. The outreach topic or target group shall be different each year. Report in the annual report the outreach approach selected, the topic, the target group and an estimated number of participants reached

Target Group	***Topics***
General Public Residential Community Home Owners HOAs Schools	• Post-construction ordinances and long-term maintenance requirements for permanent stormwater controls • Stormwater runoff issues and residential stormwater management practices • Potential water quality impacts of application of pesticides, herbicides and fertilizer and control measures to minimize runoff of pollutants in stormwater • Potential impacts of animal waste on water quality and the need to clean up and properly dispose of pet waste to minimize runoff of pollutants in stormwater • Illicit discharges and illegal dumping, proper management of non-stormwater discharges, and to provide information on reporting spills, dumping, and illicit discharges • Spill prevention, proper handling and disposal of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system • Installation of catch basin markers or stenciling of storm sewer inlets to minimize illicit discharges and illegal dumping to the storm sewer system • Proper management and disposal of used oil

B. **Measurable Goal:** At a minimum, provide business sector education/outreach to at least one (1) target group on one (1) or more appropriate topic(s) listed below during each year of the permit. The outreach topic or target group shall be different each year. Document in the annual report the outreach approach selected, the topic, target group and an estimated number of participants reached.

Target Group	***Topics***
Development Community Construction Site Operators Targeted Sources or Types of Businesses (industrial or commercial)	• Planning ordinances and grading and drainage design standards for stormwater management in new developments and significant redevelopments • Municipal stormwater requirements and stormwater management practices for construction sites • Illicit discharges and proper management of non-stormwater discharges • Spill prevention, proper handling of toxic and hazardous materials, and measures to contain and minimize discharges to the storm sewer system • Proper management and disposal of used oil and other hazardous or toxic materials, including practices to minimize exposure of materials/wastes to rainfall and minimize contamination of stormwater runoff • Stormwater management practices, pollution prevention plans, and facility maintenance procedures

II. PUBLIC INVOLVEMENT AND PARTICIPATION

Tucson shall engage the public to help spread the message on preventing stormwater pollution, to undertake group activities that highlight storm drain pollution, and contribute volunteer community actions to restore and protect local water resources. The SWMP shall include details of the public involvement/participation strategy.

A. **Measurable Goal:** The city shall implement at least one (1) of the following during each year of the permit to provide fundamental support to the city's SWMP. Document in the annual report the number of complaints/reports, amounts of garbage/waste collected, attendance at public/volunteer activities, and effectiveness and evaluation of each activity:

- Provide the opportunity to involve the public in the city's stormwater management program and to encourage public participation in monitoring and reporting spills, discharges, or dumping within their communities (such as facilitation of neighborhood watch groups) once per year.

- Provide the public an opportunity to participate in the city's stormwater management program, such as voluntary litter control activities (e.g., facilitation of Adopt-A-Wash, Adopt-A-Park, and Adopt-A-Street litter control activities) or voluntary erosion control projects. Maintain and support program as a regular ongoing activity.

- Provide the public with a household hazardous waste program to facilitate proper disposal of used oil, antifreeze, pesticides, herbicides, paints, and other hazardous and toxic materials by city residents (such as scheduled household hazardous waste collection events or operation of full-time disposal facilities) a minimum of two (2) times per year for the first two (2) years of the permit, three (3) times per year for years three (3) and four (4) of the permit, and every year thereafter.

B. **Measurable Goal:** Tucson shall provide and publicize a reporting system to facilitate and track public reporting of spills, discharges or dumping to the storm sewer system (i.e. stormwater hotline, web page, etc.) on a continuous basis.

C. **Measurable Goal:** No later than one (1) year from the effective date of this permit the current SWMP and latest annual report shall be posted on the city's web site.

III. ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

The SWMP shall detail the components and implementation of the city's illicit discharge detection and elimination (IDDE) program to include the following elements:

A. MUNICIPAL EMPLOYEE TRAINING

1. Training to educate and update stormwater inspectors/field staff on detecting, investigating, and identifying illicit discharges, De Minimis discharges, and other sources of non-stormwater discharges (i.e., field screening procedures, sampling methods, field measurements, etc.)

Measurable Goal: The city shall provide training for new employees at least one time per year. In the event there are no new employees in a given period, the city shall sufficiently document in the annual report that no new employees were hired or retained during said period.

Measurable Goal: The city shall provide refresher training for existing employees with direct stormwater responsibilities at least annually.

2. Training to educate inspectors/staff with no direct stormwater responsibilities (e.g., street sweepers, road maintenance crews, etc.) on identifying and eliminating illicit discharges. Training shall also include practices for reporting non-stormwater discharges to appropriate personnel.

Measurable Goal: The city shall develop stormwater pollution awareness training within one (1) year from the effective date of this permit and present the training to select groups or staff at least once every two years thereafter.

B. SPILLS

1. The city shall implement control measures at municipal facilities to prevent spills which may contact stormwater.

Measurable Goal: Each municipal facility (excluding offices and administrative buildings) that uses, stores, or handles used oil or other toxic and hazardous materials where any single container exceeds five (5) gallons and where such materials are exposed or have the potential to be exposed to stormwater shall have site-specific materials handling and spill response procedures. An assessment shall be conducted at each of these facilities at least annually during the permit term to ensure procedures are in place and effective. Some city-owned facilities that are included in this section may be permitted under the Multi-Sector General Permit (MSGP) or another AZPDES permit. In this case, the specific permit shall govern.

2. The city shall properly handle, store, transport, and dispose used oils and other hazardous or toxic materials and wastes associated with municipal operations and facilities, including practices to minimize exposure of these materials to precipitation.

Measurable Goal: The city shall maintain a copy of the site-specific materials handling and spill response procedures, and make them readily available at all city facilities. Tucson shall review the site-specific materials handling and spill response procedures every two (2) years, and that review shall include the participation of personnel with stormwater expertise to provide feedback relating to any potential stormwater concerns.

C. **MAJOR OUTFALLS** as defined by 40 CFR 122.26 and Field Screening Points

1. **Measurable Goal:** The city shall maintain an inventory or map of all major outfalls, and of other field screening points (if applicable), identified by the city as priority for illicit discharges or other non-stormwater flows.

2. **Measurable Goal:** Tucson shall conduct ongoing dry weather field screening of major outfalls and other screening locations. Field screening includes:

   - Visual inspection for flow, trash, suds, odors, etc.
   - Field sampling, when significant flow is observed for chemical indicator parameters
   - Re-inspection and sampling within 24 hours, if flow is still present

The IDDE field screening program shall be further detailed in the SWMP.

D. **INSPECTIONS** of outfalls:

1. **Measurable Goal:** The city shall inspect the following 'priority' major outfalls or field screening points (if applicable) once each year:
   - All outfalls that discharge to an impaired or an outstanding Arizona water (OAW) or other perennial water;
   - All outfalls that have been a source of illicit discharge in the past five (5) years (unless the source has been eliminated or has been shown not to be a significant source of pollutants); and
   - All outfalls identified as priority by the city [see III (C) (1) above] for illicit discharges or other non-stormwater flows.

2. **Measurable Goal:** At a minimum, the city shall inspect 20% of the remaining (i.e., non-priority) major outfalls and screening locations each year. *[Note: The city currently has identified 500 locations where stormwater discharges (outfalls) from Tucson's MS4.]* The city shall document inspections, findings and report evidence of non-stormwater flows, and follow-up actions taken by the city.

E. **INVESTIGATION** – The city shall investigate reported potential illicit discharges and identified dry weather flows to identify source(s). Investigation may include discharge sampling, data collection and research, and storm sewer inspections. The city shall develop criteria by which to determine whether dry weather flows contain illicit connections or discharges, and shall implement a program to effectively make such determinations.

Measurable Goal: Tucson shall respond to 90% of all reports of illicit discharges to the city's MS4.

Measurable Goal: The city shall initiate investigation of 80% of potential illicit discharges identified by field screening, public reporting or other detection methods within three (3) business days of the date of detection or report. However, investigation of discharges that contain obvious indicators of pollutants (such as sewage, sudsy water, colored waters, chemical or petroleum odors, etc.) that are flowing at the time of inspection shall be initiated immediately upon detection.

F. **ILLICIT DISCHARGE ELIMINATION** – Tucson shall take timely and appropriate action to eliminate identified sources of illicit discharges to the stormwater system, including escalating enforcement response, when necessary to terminate illicit discharges.

Measurable Goal: Initiate corrective action or enforcement mechanisms to eliminate: 1) illicit discharges the city has identified to date that are not yet resolved within 120 days of permit issuance,

and 2) any new illicit discharges detected within 60 days of identification of source. However, sources that are fully investigated and that the city determines do not contain significant levels of pollutants are not subject to these timeframes for mitigation. In this event, the city shall maintain documentation of the investigation, sampling, and reasons for determination that such discharges do not contain significant levels of pollutants.

G. **COMPLIANCE ACTIVITIES / ENFORCEMENT** – The city shall follow enforcement procedures that incorporate escalating actions for violations of municipal stormwater requirements, ordinance or code identified during inspections.

Measurable Goal: The city shall follow enforcement procedures that incorporate escalating actions for violations of municipal stormwater requirements, ordinance or code identified during inspections. At least 80% of all cases will be satisfactorily resolved or turned over to the city court system within one (1) calendar year of the original enforcement action.

IV. MUNICIPAL FACILITIES POLLUTION PREVENTION / GOOD HOUSEKEEPING PRACTICES

A. EMPLOYEE TRAINING

Measurable Goal: For employees directly involved in these activities provide new employee training at least one (1) time per year and provide refresher training for existing employees directly involved in these activities at least once every two (2) years. Specific staff to be trained for each topic is to be identified in the SWMP. Training shall include:

1. Proper street repair and road improvement practices to minimize discharges to the storm sewer system;
2. Specific procedures and spill management practices to prevent or minimize spills or discharges to the storm sewer system;
3. Proper handling, storage, transportation, and disposal of used oil and other toxic and hazardous materials and wastes to prevent spills, exposure to rainfall, and contamination of stormwater runoff; and
4. Stormwater management practices and pollution prevention plans for municipal stormwater inspectors. Training shall include information on Floodplain and Erosion Hazard Management Ordinance, Water Course Maintenance Guidelines, and supporting development standards of Tucson Code, and may also include other stormwater discharge regulations and permit requirements.

In the event there are no new employees in a given period, Tucson document in the annual report that no new employees were hired or retained during said period to support why training was not conducted.

B. **MUNICIPALLY-OWNED AND OPERATED FACILITIES** – Some city-owned facilities that are included in this section may be permitted under the MSGP or another AZPDES permit. In this case, the specific permit shall govern. The city shall, however, develop an internal process to determine facilities that may require coverage under the MSGP or alternative permits, and maintain an inventory or other tracking mechanism of such sites.

1. Tucson shall develop and maintain an inventory, list, database, or map of facilities owned and operated by Tucson (excluding office and administration buildings) that have the potential to discharge pollutants to waters of the U.S. This information shall include the name and address of the facility, latitude/longitude, facility contact, and brief description of activities that may generate pollutants of concern. These include, but are not limited to, the following types of facilities:

- City parks, golf courses, and other recreational facilities (where landscape maintenance, herbicide, pesticide, and fertilizer application, and waste management are implemented);
- Water treatment plants;
- Public swimming pools (pool maintenance/repair and chemical storage);
- Fire stations and other city fleet maintenance facilities (vehicle washing and maintenance, chemical handling, waste storage); and
- Material and waste storage and processing facilities, including oil collection facilities.

Measurable Goal: The city shall develop an inventory, database, list, or map of facilities described above within two (2) years after the date of permit issuance. The process for developing, review and update of this information on a periodic basis shall be described in the SWMP.

2. Tucson shall review the potential pollutants and other factors of risk at such facilities and prioritize them for an on-site review to determine whether they may have a potential to cause a substantial pollutant load (i.e., identify 'higher risk' facilities).

Measurable Goal: Develop a system to review and prioritize the municipal facility inventory [IV.B. 1] and include it in the SWMP. The city shall complete the prioritization process by the end of year two (2) of the issuance date of this permit.

Factors that will be considered for purposes of prioritization include:
- Quantity and location of materials used and/or stored at the facility;
- Potential for exposure to stormwater; and
- Potential to discharge a substantial pollutant load to the MS4 or to a water of the U.S.

Facilities that are already covered under the MSGP or other AZPDES permits will be ranked as low priority for consideration under this permit.

Measurable Goal: Develop practices to facilitate the proper management and disposal of used oil and toxic materials generated by the MS4 by the first (1) year of permit issuance consistent with procedures in III.B.2.

Measurable Goal: Develop a program to effectively minimize pollution from pesticide/herbicide use at city facilities by the second year of permit issuance. Tucson shall only apply pesticides that are Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) approved for aquatic application in any area within or adjacent to waters of the U.S., including ephemeral washes.

C. **INSPECTIONS** – The city shall perform the following:

1. MS4 Drainage System Components – Tucson shall perform routine visual inspections of MS4 system components to identify the presence of illicit discharges, excess sediment, litter, debris, or other pollutants (including floatables) that may obstruct flow or be transported in stormwater, and to determine maintenance needs. (*Note: Such components may include drainage/infiltration channels, washes, roadside drainage structures (i.e., linear systems) and retention and detention basins.)*

Measurable Goal: The city shall define areas of the MS4 drainage system that are a priority for inspection, based on system history, and other factors that shall be identified in the SWMP. These priority areas shall be inspected at least once each year.

2. Municipal Facility Inspections – Tucson shall inspect each 'higher risk' municipal facility (see IV.B(1)) and shall also recommend repair or maintenance of control measures, as necessary,

or other pollution prevention activities with the goal of improving the quality of stormwater discharged from the site.

Measurable Goal: Inspect each of the 'higher risk' facilities every two years beginning in year three (3) of the permit term. If any of the above are permitted under the MSGP, completing the annual Comprehensive Facility Inspection required by the industrial stormwater permit(s) may be used to satisfy this provision.

Measurable Goal: The city shall identify municipal facilities inspected in the annual report and provide comment whether improvements were needed. The city shall initiate any recommended improvements within three (3) months of the inspection and set a schedule for implementation. The city shall maintain a system for tracking the status of improvements and date(s) of implementation.

D. **INFRASTRUCTURE MAINTENANCE** – The city shall:

1. Address maintenance needs identified as deficient by inspections, monitoring, or other reporting including:

- Maintenance and cleaning of municipal drainage/infiltration channels, ditches, washes and roadside drainage structures to minimize the discharge of pollutants from the drainage system, including litter and debris control;

- Maintenance and cleaning of municipal retention and detention basins to minimize the discharge of pollutants from the drainage system, including litter and debris control, vegetation management, and sediment removal; and

- Maintenance and cleaning of municipal streets used for stormwater conveyance, street/roadway catch basins, and storm drain inlets to minimize the discharge of pollutants from the drainage system.

Measurable Goal: Evaluate drainage system maintenance priorities and update the inspection schedule at least once each year. The city shall report the number of units (street miles, unit number of storm drain inlets, pounds of debris, etc.) cleaned each year in the annual report.

2. Sweep municipal streets and roads, and roads and parking areas in city parks, recreational areas, and city facilities as needed to minimize the accumulation and transport of sediment and litter to the storm sewer system.

   The sweeping program and rationale for sweeping frequency shall be described in the SWMP. Tucson shall provide information about sweeping activities in the annual report each year.

Measurable Goal: Evaluate street sweeping frequency at least once a year. Report the number of units (street miles, pounds, gallons, etc) in the annual report for street and lot sweeping activities.

3. Assess all municipal maintenance activities performed by the city (e.g., paving and road repairs, saw cutting, concrete work, curb and gutter replacement, buried utility repairs and installation, vegetation removal, street and parking lot striping, drainage channel cleaning, etc.) and develop control measures for those activities.

Measurable Goal: Develop a control measure field manual for municipal maintenance activities within two (2) years of permit issuance.

Measurable Goal: Incorporate control measures for road maintenance activities into its standard operating procedures.

E. **MUNICIPAL SYSTEM MAPS** – The city shall prepare and routinely update maps of the MS4 system. The preferred format is ESRI shape files, projected in meters to UTM zone 12 with a NAD83 datum. Geographic Information System (GIS) layers must show where stormwater runoff is routed in response to a storm event. The stormwater system map(s) shall, at a minimum, include the following information:

Measurable Goal: The city shall incorporate mapping of at least the following items in the fourth (4^{th}) year annual report:

1. Linear Drainage Structures
   Line layer showing the location of all stormwater system pipes and the direction of stormwater flow.

2. Storm Drain Inlets and Catch Basins
   Point layer showing the locations of all storm drain inlets and catch basins.

3. Outfalls
   a) Point layer showing the location of all outfalls (pipes or culverts).
   b) Layer showing the drainage area associated with each of the monitored outfalls identified in Table 1 of the permit.

4. Detention/Retention Basins
   Point or polygon layer showing the locations of all identified city-owned retention and detention basins that are connected to the municipal stormwater conveyance system (i.e., that receive drainage from or discharge to a stormwater conveyance).

5. Jurisdictional MS4 Boundary
   Line or polygon layer showing the jurisdictional boundaries of the MS4, including any new land annexations during the permit term.

Measurable Goal: The city will complete a study that evaluates the cost, method, and time it will take to complete the following. The results of this study shall be submitted with the 4^{th} year annual report.

1. Linear Drainage Structures
   a) Line layer showing the location of all streets used for stormwater conveyance and the direction of stormwater flow.
   b) Line layer showing other linear stormwater conveyance structures (channels, floodways, etc.) and the direction of stormwater flow.

2. Land Uses
   Polygon layer showing the land uses within each drainage area associated with each outfall.

3. Detention/Retention Basins
   a) Point layer showing the location of all privately-owned retention and detention basins that are connected to the municipal stormwater conveyance system (i.e., that receive drainage from or discharge to a stormwater conveyance).
   b) Line layers showing the drainage infrastructure associated with each retention/detention basin.

4. Locations of Discharges to Waters of the United States

Line or polygon layer showing the location (and name) of all waters of the U.S. that may receive stormwater discharges from the MS4 either directly or by way of a conveyance owned or operated by another person. Any waterbody that is listed as an Outstanding Arizona Water (A.A.C. R18 -11-112) or as an Impaired Water (Arizona's 303[d] and other impaired water list[s]) shall be clearly identified.

V. INDUSTRIAL AND COMMERCIAL FACILITIES (Non-Municipally Owned)

A. **MUNICIPAL EMPLOYEE TRAINING** – Training to educate and update stormwater inspectors on stormwater management practices and control measures for facilities subject to inspection. Training shall include information on requirements for stormwater discharges associated with industrial and commercial activity.

Measurable Goal: Tucson shall provide new employee training at least one (1) time per year and shall provide refresher training for existing employees directly involved in these activities at least once every two (2) years. In the event there are no new employees in a given period, the city shall sufficiently document in the annual report that no new employees were hired or retained during said period.

B. **INVENTORY** – Tucson shall maintain the following information:

Industrial and Commercial Facility Inventory (Non-Municipal)
Tucson shall develop and maintain an inventory/list/database of facilities that have the potential to discharge pollutants to the city's storm sewer system. The list must include, at a minimum, the facility location and a brief description of activities (i.e., automobile service and repair facilities, salvage yard, etc.). The inventory shall include the following:

(1) Industrial facilities identified in 40 CFR 122.26(d)(2)(iv)(C);

(2) Industrial facilities subject to MSGP requirements, including those facilities that have submitted for a no exposure exclusion;

(3) Other industrial and commercial sources (or categories of sources) which the city determines to be a significant sources of pollutants.

Measurable goal: Maintain a system to collect and update this information on a routine basis. The SWMP shall describe the system used to track and maintain this information.

Measurable Goal: Develop a mechanism to identify facilities subject to the industrial stormwater general permit that had not filed an NOI. This system of non-filer notification shall also contain a means of communication with operators of these facilities to inform them of their responsibility to comply. Report to ADEQ with the required information per Section 8.2.2 of the permit.

C. **INSPECTIONS** – To identify and eliminate potential discharges of pollutants to the system, to verify implementation and maintenance of stormwater management practices in compliance with municipal ordinances, and to confirm permit coverage to discharge stormwater associated with industrial activity, as applicable to specific industrial facilities.

Measurable Goal: At a minimum, the city shall inspect 20% of all facilities identified in V.B annually, including re-inspections (as necessary). The SWMP shall describe the inspection and prioritization program. The number of inspections completed each year and corresponding findings/outcomes shall be documented in the annual report.

Tucson shall also evaluate alternatives for enhancing the industrial/commercial stormwater

program with the goal of increasing field presence through increased numbers of inspections and increasing interaction with commercial and industrial facilities through outreach or other innovative measures. The city shall also develop a system of prioritizing inspections with focus on facilities with higher potential to cause stormwater pollution. The SWMP shall outline an approach to evaluating program alternatives and prioritization efforts. The findings and outcomes of inspections and follow-up inspections shall be included in the annual report.

D. **COMPLIANCE ACTIVITIES AND ENFORCEMENT** – The city shall implement an effective compliance and enforcement program that incorporates escalating actions for violations of municipal stormwater requirements, ordinance or code.

Measurable Goal: Within one (1) year of permit issuance conduct a review of the city's Industrial Facility Inspection Standard Operating Procedures and evaluate its effectiveness, make recommendations for improvements, and incorporate appropriate changes, including timeframes and escalation for corrective actions. The escalated enforcement protocol should focus on having the highest level of enforcement action resolved or turned over to the city court system within one (1) year of the initial inspection/violation.

Measurable Goal: Document in the annual report the number of compliance/enforcement actions taken during the reporting period including severity, elapsed time for resolution, penalties assessed, and outcome.

VI. CONSTRUCTION SITES

A. MUNICIPAL EMPLOYEE TRAINING

Measurable Goal: Tucson shall provide new employee training at least one (1) time per year and shall provide refresher training for existing employees directly involved in these activities at least once every two (2) years. In the event there are no new employees in a given period, the city shall sufficiently document in the annual report that no new employees were hired or retained during said period. Training shall include the following:

Review Staff with Stormwater Responsibilities	▪ Grading and drainage design standards ▪ Plan review procedures ▪ Municipal ordinances related to stormwater and construction ▪ Requirements for structural and non-structural control measures on construction sites, such as erosion and sediment controls ▪ Post-construction stormwater controls
Inspection Staff with Stormwater Responsibilities	▪ Municipal ordinances related to stormwater and construction ▪ Requirements for structural and non-structural control measures on construction sites, such as erosion and sediment controls ▪ Construction BMP maintenance requirements ▪ Inspection procedures ▪ Enforcement procedures

B. **PLANNING AND LAND DEVELOPMENT** – The city shall evaluate low impact development (LID) practices, applicability, regulatory hurdles, and other factors that would contribute to the reduction of pollutants in stormwater discharges from new construction, significant redevelopment, and retrofits of commercial and residential areas. As part of this evaluation, the city shall consult with city land use planners and other appropriate departments.

Measurable Goal: The city shall include in the fourth year annual report the findings of how the implementation of LID practices would contribute to the reduction of pollutants in

stormwater discharges to the MS4 and identify a plan and schedule for incorporation into design standards.

C. **PLAN REVIEW AND APPROVAL** – For construction projects that will result in land disturbance of one (1) acre or more (including those less than one (1) acre, but are part of a larger common plan of development) the city shall:

1. Review plans for new development and redevelopment (such as grading and drainage plans). The review shall verify conformance with the city's requirements for stormwater, including erosion and sediment control, prior to issuing construction approvals or authorizations.

2. Require a copy of the ADEQ authorization document for non-municipal construction projects (as required by municipal stormwater requirements or ordinances or state stormwater requirements) to be submitted at the pre-construction meeting prior to issuing construction approval or authorization.

Measurable Goal: Review at least 80% of plans. Report the number of plans submitted and the number reviewed each year in the annual report.

D. **INVENTORY** – Tucson shall develop an inventory, list, or database of construction activities that result in land disturbance of one (1) or more acres and that have the potential to discharge to the city's storm sewer system.

Measurable Goal: Complete a comprehensive inventory within one (1) year. Maintain and update annually, thereafter.

Measurable Goal: Develop a mechanism to identify and document facilities subject to the construction stormwater general permit that did not file a timely NOI (i.e., before construction activities were initiated). This system of non-filer notification shall also contain a means of communication with operators of these facilities to inform them of their responsibility to comply. Report to ADEQ with the required information per Section 8.2.1 of the permit.

Measurable Goal: Identify the city department(s) responsible for receiving copies of NOI for AZPDES permits that discharge to the MS4 within the first year of the permit. Include receiving department's information in the annual report each year.

E. **CONSTRUCTION SITE PRIORITIZATION** – The city shall establish a prioritization schedule for inspecting construction sites. The inspection schedule shall establish a higher frequency of inspections for those sites that have a higher potential to discharge to the storm sewer system.

Measureable Goal: The city inspection prioritization schedule shall be included in the first annual report required by this permit.

F. **INSPECTIONS** – Tucson shall routinely inspect construction projects to determine whether effective erosion and sediment controls are in place, and verify conformance with local stormwater requirements and approved construction plans.

Measurable Goal: Inspect construction sites identified in the inventory (VI.B) at least one (1) time every three (3) months for highest priority sites and at least one (1) time every six (6) months for lowest priority sites, based on the prioritization schedule requirements in VI.D. Report the number of sites inspected each year in the subsequent annual report.
Measurable Goal: Conduct follow-up inspection of construction within 30 days to ensure stormwater deficiencies/concerns/non-compliance identified as a result of a routine inspection

were corrected.

G. **STORMWATER CONTROL MEASURES** – The city shall develop a comprehensive program to implement and maintain structural and non-structural control measures to reduce pollutants in stormwater runoff from constructions sites.

Measurable Goal: Within two (2) years of permit issuance, the city shall adopt a set of standards for the installation and maintenance of construction site stormwater control measures.

Measurable Goal: Within one (1) year of permit issuance conduct a review of the city's Construction Site Inspection Standard Operating Procedures and evaluate its effectiveness, make recommendations for improvements, and incorporate appropriate changes, including timeframes and escalation for corrective actions. The escalated enforcement protocol should focus on having the highest level of enforcement action resolved within one (1) year of the initial inspection/violation.

Measurable Goal: Follow the city's Construction Site Inspection Standard Operating Procedures manual and update, if necessary, to provide for timeframes and escalation for all corrective actions and compliance with Tucson City Code Title 8, Chapter 5. Protocol for escalation should consider/include severity of violation, repeat offender, willful negligence, and other appropriate factors. The escalated enforcement protocol should focus on having the highest level of enforcement action resolved within one (1) year of the initial inspection/violation.

H. **COMPLIANCE ACTIVITIES AND ENFORCEMENT** – The city shall implement an effective compliance and enforcement program that incorporates escalating actions for violations of municipal stormwater requirements, ordinance or code.

Measurable Goal: Within two (2) years of permit issuance, follow Tucson's civil citation process to establish formal enforcement escalation protocol including triggers for escalation and timeframes for corrective actions and compliance. Protocol for escalation should consider/include severity of violation, repeat offender, willful negligence, and other appropriate factors. The escalated enforcement protocol should focus on having the highest level of enforcement action resolved or turned over to the city court system within one (1) year of the initial inspection/violation.

VII. POST-CONSTRUCTION

The city shall continue to implement and enforce its master plan to reduce pollutants in discharges from its MS4 which receive discharges from areas of new development and significant redevelopment after construction is complete.

A. **REVIEW OF MASTER PLAN** – The city shall conduct an evaluation of existing master plan for reducing the discharge of pollutants to ensure existing control measures are adequate and effective.

Measurable Goal: The city shall review the master plan within 18 months of the effective date of this permit. Tucson shall include in the second year annual report the findings of the evaluation and include recommendations, as necessary, to improve the plan and a schedule for implementing enhancements.

B. **MUNICIPAL EMPLOYEE TRAINING** – The city shall ensure all staff whose job duties are associated with the evaluation of post construction control measures are trained to conduct proper inspections.

Measurable Goal: Tucson shall provide new employee training during the first year of employment and shall provide refresher training for existing employees directly involved in these activities at least once every two (2) years. In the event there are no new employees in a given period, the city shall sufficiently document in the annual report that no new employees were hired or retained during said period. Training shall include the following:

Review Staff with Stormwater Responsibilities:

- Grading and drainage design standards;
- Grading and drainage design standards;
- Municipal ordinances related to stormwater and post-construction;
- Requirements for structural and non-structural management practices in new development and redevelopment; and
- Post-construction stormwater controls.

Inspection Staff with Stormwater Responsibilities:

- Municipal ordinances related to stormwater and post-construction;
- Requirements for structural management practices in new development and redevelopment;
- Maintenance responsibilities through agreements and policies;
- Inspection procedures; and
- Enforcement procedures.

C. **POST-CONSTRUCTION CONTROLS** – The city shall inspect projects in the post-construction phase to ensure controls are installed and are being maintained as approved.

Measurable Goal: The MS4 shall inspect at least 75% of sites that have received city permits for earthwork or other ground disturbing activities within one (1) year after construction has been completed to determine the effectiveness of site stormwater controls.

Measurable Goal: The city shall develop an inspection, maintenance, and tracking program and report the number of sites that receive post-construction inspections in the annual report.

D. **COMPLIANCE ACTIVITIES AND ENFORCEMENT** – The city shall implement an effective compliance and enforcement program that incorporates escalating actions for violations of municipal stormwater requirements, ordinance or code.

Measurable Goal: Follow the city's civil citation process to address code and ordinance violations. The city shall document areas of non-compliance and follow-up actions taken by the city to achieve compliance. Tucson shall assign maintenance responsibility through polices, maintenance agreements, or easements.

APPENDIX B

ANNUAL REPORT FORM
For Phase I MS4s – Due September 30th Each Year

Part 1: General Information

A. Name of Permittee: _____

B. Permit Number: _____

C. Reporting Period: July 1, _____ - June 30, _____

D. Name of Stormwater Mgt. Program Contact: _____

Title: _____

Mailing Address: _____

City: _____ Zip: _____ Phone: _____

Fax Number: _____ Email Address: _____

E. Name of Certifying Official: _____
(Sections 9.2 and 9.12 of the permit)

Title: _____

Mailing Address: _____

City: _____ Zip: _____Phone:_____

Fax Number: _____Email Address: _____

Part 2: Annual Report Certification

The Annual Report Form (ARF) must be signed and certified by either a principal executive officer or ranking elected official; or by a "duly authorized representative" of that person in accordance with Sections 9.2 and 9.12 of the permit.

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____
Signature of Certifying Official Date

Part 3: Narrative Summary of Stormwater Management Program Activities

Attach a status summary addressing each of the following in the approximate order referenced below. Briefly describe implementation, progress, and challenges in each area during the reporting year. Also, explain any significant developments or changes to the number or type of activities, frequency or schedule of activities, or the priorities or procedures for specific management practices.

A. Summarize public awareness activities including outreach
   - Report outreach events, topics, number of people reached, number and type of materials distributed and the target groups.

B. Summarize public involvement activities including outreach
   - Identify activities, number of people involved, number and type of materials distributed if applicable
   - Describe MS4 system for public reporting of spills, dumping, discharges, and related stormwater issues,

C. Summarize Illicit Discharge, Detection and Elimination (IDDE) program activities. Include:
   - Illicit discharge prevention activities
   - Training dates and topics
   - IDDE screening program and investigations - including an overview of industrial facility inspections, identified sources, storm drain cross connection investigations, and any significant corrective or enforcement actions;

D. Municipal Facilities
   - Status of identification and inventory of these facilities
   - Overview of inspection findings (i.e., # inspected, # with follow-up actions needed, significant findings)
   - Activities needed and performed in response to inspections (control measures implemented)
   - Identification and tracking of municipally-owned and operated facilities subject to permitting under the Multi-Sector General Permit (MSGP)
   - Status of all inventories, maps, and map studies required by the permit to be developed including completion dates

E. Industrial Facilities
   - Status of identification and inventory of these facilities.
   - An overview of inspection findings and note significant findings
   - Corrective and enforcement actions needed and taken in response to inspections

F. Construction Program Activities
   - Status of inventory/plan review of these facilities
   - An overview of inspection findings and significant findings
   - Corrective and enforcement actions needed and taken in response to inspections

G. Post-Construction Controls
   - Summary of any new post-construction controls for municipal projects
   - An overview of the city's post-construction inspection program
   - Corrective and enforcement actions needed and taken in response to post-construction inspections
   - Summary of any new or revised post-construction requirements related to permits the city issues

H. Outfall inspection program; describe the status of
   - Staff training
   - Outfall inventory
   - Inspection tracking system
   - Inspection and screening procedures, and significant findings

I. Description of any new or revised ordinances, rules or policies related to stormwater management or control, if applicable.

J. Fiscal Expenditures; provide a brief report on expenditures related to implementation of the city's stormwater program for the previous fiscal year.

Part 4: Numeric Summary of Stormwater Management Program Activities
Provide a summary of stormwater management practices and activities performed each year as indicated in the table below.

STORMWATER MANAGEMENT PRACTICE OR ACTIVITY	ANNUAL REPORTING YEAR (July 1 – June 30)				
	2011 - 2012	2012 - 2013	2013 - 2014	2014 - 2015	2015 - 2016
Illicit Discharge Detection and Elimination Program					
1. Municipal Employee Training					
Number of training sessions (on non-stormwater discharges and the IDDE program)					
Number of employees attending training					
2. Spill Prevention					
Number of municipal facilities identified with hazardous materials					
Number of spills at municipal facilities with hazardous materials that occurred in outside areas					
Number of facility assessments completed *(identify any issues found requiring follow-up in narrative and summarize new practices to minimize exposure)*					
Date of last review of site-specific materials handling and spill response procedures (*identify committee participant with stormwater expertise in narrative*)					
3. Outfall Inspections					
Total number of major outfalls identified to date					
Total number inspected *(attach or forward electronic copy of inventory or map of major out falls and priority outfalls)*					
Number of 'priority outfalls' identified to date *(summarize findings and follow-up actions in narrative)*					
Number of 'priority outfalls' inspected (*summarize findings and follow-up actions in narrative*)					

Number of dry weather flows detected					
Number of dry weather flows investigated					
Number of major outfalls sampled during dry weather flow					
Number of illicit discharges identified					
Number of illicit discharges eliminated					
Amount of stormwater drainage system inspected (length)					
Number of storm drain cross connection investigations					
Number of illicit connections detected					
Number of illicit connections eliminated					
Number of corrective or enforcement actions initiated within 60 days of identification					
Percent of cases resolved or transferred to the city court system within one (1) calendar year of original enforcement action					
Number of illicit discharge reports received					
Percent of illicit discharge reports responded to					
Percent of responses initiated within three (3) business days					
Municipal Facilities					
1. Employee Training					
Number of training events *(dates and topics to be included in narrative)*					
Number of staff trained					
2. Inventory, Map, or Database of MS4 Owned and Operated Facilities					
Total number of facilities on inventory					
Date identification of "higher risk' facilities completed and date of prioritization of municipal facilities completed					
Number of municipally-owned high risk facilities identified.					
3. Inspections					
Miles of MS4 drainage system prioritized for inspection					
Miles visually inspected					
Number of 'higher risk' municipal facilities inspected					

Number of 'higher risk' municipal facilities found needing improved stormwater controls					
4. Infrastructure Maintenance					
Linear miles of drainage channel cleaned					
Linear miles of closed conduit cleaned					
Street sweeping (linear miles)					
Street and lot sweeping after public events (provide units)					
Record amount of waste collected from street and lot sweeping (reported in pounds, gallons, etc.)					
Number of retention/detention basins cleaned					
Total number of catch basins identified to date					
Number of catch basins cleaned					
Industrial and Commercial Sites Not Owned by the MS4					
Number of training events for MS4 staff					
Number of municipal staff trained					
Number of industrial facilities inspected (see Appendix A, Part V.B)					
Total number of facilities on the priority list					
Number of corrective or enforcement actions initiated on industrial facilities					
Percent of cases resolved within one (1) calendar year of original enforcement action					
Number of cases referred to the city court system					
Construction Program Activities					
Number of training events for MS4 staff *(include topics in narrative summary)*					
Number of municipal staff trained					
Number of construction/grading plans submitted for review					
Number of ground disturbing permits issued					
Number of construction/grading plans reviewed					
Number of permitted constructions sites					

Number of construction sites inspected					
Number of corrective or enforcement actions initiated on construction facilities *(identify the type of actions in narrative summary)*					
Number of corrective actions resolved or turned over to the city court system					
Post Construction Program Activities					
Number of post-construction inspections completed					
Number of corrective or enforcement actions initiated for post-construction activities *(identify the type of actions in narrative summary)*					

Unless otherwise indicated, information reported in Part 4 is for the reporting period.

Part 5: Evaluation of the Stormwater Management Program

In accordance with Section 5.4 of the permit, provide an evaluation of the progress and success of the stormwater management program each year, including an assessment of the effectiveness of stormwater management practices in reducing the discharge of pollutants to and from the municipal storm sewer system.

Part 6: Stormwater Management Program Modifications

In accordance with Section 5.5 of the permit, provide a description of modifications, if applicable, to the stormwater management program each year as follows:

1. Addition of New Control Measures: Summarize the development and implementation of any new stormwater management practices or pollution controls each year.

2. Addition of Temporary Control Measures: Specify the occasions when these controls were initiated and terminated, and the perceived success of these temporary control measures.

3. Increase of Existing Control Measures: Summarize modifications to existing stormwater management practices that increase the number of activities, increase the frequency of activities, or other increases in the level of implementation.

4. Replacement of Existing Control Measures: Briefly summarize any replacements made with prior approval of ADEQ per section 5.6(4) of the permit.

Note: Modifications to reduce the number of stormwater management practices or activities, frequencies, time frames, level of implementation, or any other program standard specified in Appendix A of the permit requires permit modification. (Refer to Section 5.6 of the permit).

Part 7: Monitoring Locations

For the year one (1) annual report, provide a brief description of each stormwater monitoring location (outfall), including the following information. For subsequent annual reports, advise if any of the information has changed or is updated.

1. Name and description of receiving water
2. Outfall identification number
3. Address or physical location of the site
4. Latitude and longitude
5. Size (acres) of the drainage area
6. Land uses within the drainage area with an estimated percentage of each use
7. Type of monitoring equipment

Note: Modifications to monitoring locations shall not be implemented without permit modification

Part 8: Storm Event Records

For each outfall identified in Section 7.0, Table 1.0 of the permit, summarize all measurable storm events (0.1 inch or greater) occurring in the drainage area of each outfall within the winter and summer wet seasons, respectively, until samples have been collected for the outfall. Include the date of each event, the amount of precipitation (inches) for each event, and whether a sample was collected, or if not collected, information on the conditions that prevented sampling. (Note: If unable to collect stormwater samples due to adverse climatic conditions, provide, in lieu of sampling data, a description of the conditions that prevented sampling. Adverse climatic conditions which may prevent the collection of samples include weather conditions that create dangerous conditions for personnel, such as local flooding, high winds, electrical storms, etc.)

The following table is an example of the storm event data to be provided:

	Date	Outfall Site 1	Rainfall (inches)	Outfall Site 2	Rainfall (inches)	Outfall Site 3	Rainfall (inches)	Outfall Site 4	Rainfall (inches)
Summer (June 1 – Oct. 31)	11/01/11	NR	0.1	SC	0.2	NF	0	DC	0.5
Winter (Nov. 1 – May 31)									

KEY:

NR	Not Representative (storm event of less than 0.1 inches)
SC	Sample Collected
IS	Insufficient Sample (for analysis)
IF	Insufficient Flow (for sample collection)
NF	No Flow
DC	Dangerous Conditions

Part 9: Summary of Monitoring Data (By Location)

Use a separate table for each outfall monitoring location. Provide the outfall identification number, the receiving water, designated uses, and the lowest surface water quality standards applicable to the receiving water. Enter the analytical results for the stormwater samples collected for each season of the reporting period for each year. Enter subsequent monitoring data for each location on the same form. Include, as an attachment, the laboratory reports for stormwater samples.

OUTFALL ID: _____ **RECEIVING WATER:** _____ **DESIGNATED USES:** _____		**MONITORING SEASONS** Summer: June 1 – October 31 Winter: November 1 – May 31									
		Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015	Winter 2015-16	Summer 2016
SAMPLING DATE(S):											
MONITORING PARAMETERS [1, 2]	**SWQS**										
Conventional Parameters											
Flow [3]											
ph											
Temperature											
Hardness											
Total Dissolved Solids (TDS) (mg/L) [2]											
Total Suspended Solids (TSS) (mg/L) [2]											
Biochemical Oxygen Demand (BOD) (mg/L) [2]											
Chemical Oxygen Demand (COD) (mg/L) [2]											

	SWQS	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015	Winter 2015-16	Summer 2016
Inorganics											
Cyanide, total (ug/L) [2]											
Nutrients (mg/L) [2]											
Nitrate + Nitrite as N											
Ammonia as N											
Total Kjeldahl Nitrogen (TKN)											
Total Phosphorus											
Total Orthophosphate											
Microbiological											
Escherichia coli (*E. coli*) (CFU/100 mg or MPN) [2]											
Total Metals (ug/L) [2]											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Chromium											
Copper											
Lead											
Mercury											
Nickel											
Selenium											
Silver											
Thallium											
Zinc											

	SWQS	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015	Winter 2015-16	Summer 2016
Organic Toxic Pollutants											
Total Petroleum Hydrocarbons (TPH) (mg/L) [2]											
Total Oil and Grease (mg/L) [2]											
VOCs, Semi-VOCs, and Pesticides (ug/L) [2]											
Acrolein											
Acrylonitrile											
Benzene											
Bromoform											
Carbon tetrachloride											
Chlorobenzene											
Chlorodibromomethane											
Chloroethane											
2-chloroethylvinyl ether											
Chloroform											
Dichlorobromomethane											
1,2-dichlorobenzene											
1,3-dichlorobenzene											
1,4-dichlorobenzene											
1,1-dichloroethane											
1,2-dichloroethane											
1,1-dichloroethylene											
1,2-dichloropropane											
1,3-dichloropropylene											
Ethylbenzene											
Methyl bromide											
Methyl chloride											
Methylene chloride											
1,1,2,2-tetrachloroethane											
Tetrachloroethylene											

	SWQS	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015	Winter 2015-16	Summer 2016
Toluene											
1,2-trans-dichloroethylene											
1,1,1-trichloroethane											
1,1,2-trichloroethane											
Trichloroethylene											
Trimethylbenzene											
Vinyl chloride											
Xylene											
SVOCs - Acid Extractables (ug/L) [2]											
2-chlorophenol											
2,4-dichlorophenol											
2,4-dimethylphenol											
4,6-dinitro-o-cresol											
2,4-dinitrophenol											
2-nitrophenol											
4-nitrophenol											
p-chloro-m-cresol											
Pentachlorophenol											
Phenol											
2,4,6-trichlorophenol											
SVOCs - Bases/Neutrals (ug/L) [2]											
Acenaphthene											
Acenaphthylene											
Anthracene											
Benz(a)anthracene											
Benzo(a)pyrene											
Benzo(b)fluoranthene											
Benzo(g,h,i)perylene											
Benzo(k)fluoranthene											

	SWQS	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015	Winter 2015-16	Summer 2016
Chrysene											
Dibenzo(a,h)anthracene											
3,3-dichlorobenzidine											
Diethyl phthalate											
Dimethyl phthalate											
Di-n-butyl phthalate											
2,4-dinitrotoluene											
2,6-dinitrotoluene											
Di-n-octyl phthalate											
1,2-diphenylhydrazine (as azobenzene)											
Fluroranthene											
Fluorene											
Hexachlorobenzene											
Hexachlorobutadiene											
Hexachlorocyclopentadiene											
Hexachloroethane											
Indeno(1,2,3-cd)pyrene											
Isophorone											
Naphthalene											
Nitrobenzene											
N-nitrosodimethylamine											
N-nitrosodi-n-propylamine											
N-nitrosodiphenylamine											
Phenanthrene											
Pyrene											
1,2,4-trichlorobenzene											

	SWQS	Winter 2011-12	Summer 2012	Winter 2012-13	Summer 2013	Winter 2013-14	Summer 2014	Winter 2014-15	Summer 2015	Winter 2015-16	Summer 2016
Pesticides (ug/L) [2]											
Aldrin											
Alpha-BHC											
Beta-BHC											
Gamma-BHC											
Delta-BHC											
Chlordane											
4,4'-DDT											
4,4'-DDE											
4,4'-DDD											
Dieldrin											
Alpha-endosulfan											
Beta-endosulfan											
Endosulfan sulfate											
Endrin											
Endrin aldehyde											
Heptachlor											
Heptachlor epoxide											
PCB-1242											
PCB-1254											
PCB-1221											
PCB-1232											
PCB-1248											
PCB-1260											
PCB-1016											
Toxaphene											

Footnotes

1 The permittee shall report on any additional parameters that were monitored for seasonal stormwater sampling as required by Section 6.0 of this permit (Special Conditions).
2 Analytical results shall be reported in the units specified for each category or parameter.
3 Report the average flow rate for the sampling period (no more than 3 hours).

Part 10: Assessment of Monitoring Data

A. Stormwater Quality: Provide an evaluation of the sampling results for each outfall monitoring location, including an assessment of any improvements or degradation of stormwater quality from each drainage area. In the year four (4) annual report, discuss possible explanations for stormwater quality trends, including the implementation of stormwater management practices to reduce the discharge of pollutants to and from the storm sewer system.

B. Water Quality Standards (WQS): Compare the sampling results for each outfall monitoring location with the applicable SWQS for the receiving water.

C. Exceeding a WQS: Note any exceedance of a surface water quality standard (as measured at the outfall) during the reporting year, including, at a minimum, the following information:

1. Sampling date;
2. Monitoring location (outfall identification number);
3. Receiving water and water quality standard which was exceeded;
4. Outfall monitoring results (laboratory reports);
5. A description of the circumstances that may have caused or contributed to the exceedance of an applicable water quality standard;
6. If a pollutant is noted at levels above the WQS at a particular outfall, more than 1X ('reoccurs'), describe actions taken to determine the source(s) of the pollutant per Sections 4.3 and 4.4 of the permit. Also state any proposed follow-up actions or additional and/or revised management practices or pollution controls to prevent the discharge from causing or contributing to an exceedance of a water quality standard in the future; and
7. A schedule for implementing the proposed follow-up, stormwater or non-stormwater management practices or pollution controls.

Part 11: Estimate of Annual Pollutant Loadings

Provide an estimate of the pollutant loadings each year from the municipal storm sewer system to waters of the U.S. for each constituent listed in Section 7.4 of the permit detected by stormwater monitoring within the permit term. Pollutant loadings and event mean concentrations may be estimated from sampling data collected at the representative monitoring locations, taking into consideration land uses and drainage areas for the outfall. Include a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis, and calculation methods. Compare the pollutant loadings estimated each year to previous estimates of pollutant loadings.

Part 12: Annual Expenditures

Provide a brief statement of the expenditures incurred each reporting period (July 1 – June 30) to implement and maintain the stormwater management program, including associated monitoring and reporting activities. This figure should include funds related exclusively to implementation of the stormwater program. Provide the estimated budget for implementing and maintaining the stormwater program in the subsequent reporting period. Include a statement of the funding sources used to support program expenditures.

Part 13: Attachments

Attach a copy of each of the following documents for the first year annual report, and each subsequent year if changes are made. If no changes are made to these during a reporting period, indicate, *'no changes were made this period, the 20XX submittal is current.'*

- ☐ Drainage system maps
- ☐ List of major outfalls
- ☐ List of changes to the major outfall inventory (new outfalls, outfalls out of service), including drainage area and coordinates for the outfalls listed in Table 1 of the permit (4^{th} year report)
- ☐ Laboratory reports for stormwater monitoring performed in the reporting period
- ☐ New or revised ordinances associated with stormwater management
- ☐ New or revised public outreach documents

APPENDIX C

Stormwater Management Program (SWMP) Requirements

The Stormwater Management Program (SWMP) shall be developed, maintained, and updated as necessary to reduce the discharge of pollutants to the municipal storm sewer system to the maximum extent practicable. The written plan shall describe the management practices and control measures established to minimize the discharge of pollutants, and shall, in addition to any specific requirements of this permit, address the following elements. If the city's SWMP does not generally follow in Appendix C, the SWMP plan shall include a cross reference to each of the required provisions.

Tucson's SWMP shall detail 1) the current status of the program with respect to the issues in this appendix, and 2) the approach and processes necessary to achieve the provisions of this permit throughout the permit term. The SWMP shall describe systems in place, goals and timelines to demonstrate compliance with Appendix A, and also address the following areas.

I. **PUBLIC EDUCATION AND OUTREACH** – Describe on-going and planned outreach activities to educate the community (developers, contractors, homeowners, public, etc.) on stormwater management practices, impacts of stormwater discharges, and steps that can be taken to reduce stormwater pollution. (Include the frequency and type of outreach, target audiences and the development and distribution of educational materials.)

II. **PUBLIC INVOLVEMENT AND PARTICIPATION** – Describe on-going and planned processes to involve the public in the SWMP and in activities to implement, update, and review the SWMP.

III. **ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)** – The SWMP shall detail the components and implementation of the city's IDDE program as follows:

MUNICIPAL EMPLOYEE TRAINING
A description of training to educate and update inspectors and other field staff on detecting, investigating, and identifying illicit discharges (to include field screening procedures, field measurements, sampling methods, use of chain of custody protocols when analytical monitoring is used). Include the frequency and type of training. "Select groups" shall be described in the SWMP and include those with the potential to directly impact, identify, report, or stop illicit stormwater discharges.

SPILL PREVENTION AND RESPONSE
Describe practices and procedures to prevent, contain, and otherwise manage spills to minimize discharges to the municipal storm sewer system.

MAJOR OUTFALLS as defined by 40 CFR 122.26 and Field Screening Points

- **Practices and Procedures for Field Screening** (dry weather outfall monitoring)
  - Outfall Inventory: An inventory of major outfalls [1], organized by drainage area or a mapping system showing outfalls.

- Field Screening Procedures [2]: A description of standard procedures and methods for inspecting and screening outfalls, documenting conditions, and reporting potential illicit discharges. Describe the system used to track and record findings.

INSPECTIONS of Major Outfalls

- Inspection Priorities and Schedule: A description of the priorities and schedule for inspecting major outfalls and screening points; the priorities for inspection and the basis for those priorities; and the frequency and schedule of inspections for major outfalls.

- Industrial Facility Inspections: Describe the inspection practices for industrial facilities to identify cross connections with sanitary sewer lines and other potential sources of illicit discharges or releases of toxic materials to the storm sewer system.

INVESTIGATION of Potential Illicit Discharges

- Dry Weather Discharges: The city shall develop and include in the SWMP a detailed field screening protocol for investigating dry weather discharges. This shall include criteria to identify, characterize and prioritize dry weather discharges; determine the source (s) and develop a schedule for their timely elimination. This shall include the rationale for selection of dry weather field screening locations and for performing appropriate follow-up analytical monitoring. Include visual and analytical monitoring procedures, and specify how and when decisions are made to sample.

- Existing Dry Weather Flows: During the term of this permit, the city shall re-evaluate any known dry weather discharges that have not been eliminated or investigated in the last five (5) years.

- Illicit Discharge Investigation (Source Identification): Describe the city's practices and procedures to investigate potential illicit discharges and other sources of non-stormwater, including methods to identify possible sources (such as sampling procedures, storm sewer investigation practices, research of non-stormwater discharges, etc.). The IDDE provisions in the SWMP shall include field screening thresholds to indicate when an illicit discharge may be present and follow-up investigations are necessary.

- Tracking and Reporting: Describe Tucson's process to summarize and report the results of dry weather field screening and analytical monitoring, including the identification and elimination of illicit connections and illegal discharges.

- Illicit Discharge Elimination: Describe the process for conducting follow-up source identification investigation, and the enforcement strategy to eliminate sources of illicit discharges and ensure compliance with illicit discharge ordinances. Include a description of the type of corrective and enforcement actions (notice of correction, notice of violation, fines, etc.) that may be initiated.

ILLICIT DISCHARGE ELIMINATION

A description of a program to detect and eliminate illicit discharges and improper disposal to the storm sewer, including the following information:

- **Practices for Preventing Illicit Discharges**
  - Illicit Discharge Ordinance: A description of the ordinance(s) used to prohibit and eliminate illicit discharges to the storm sewer system. Include, as an attachment, a copy of the ordinance(s).
  - Non-Stormwater Discharge Evaluation: A description of the program to manage non-stormwater discharges to the municipal storm sewer system (such as approvals, permits,

or discharge notifications), including a list of the types of non-stormwater discharges that are or will be allowed to discharge to the storm sewer system.

- Non-Stormwater Discharge Records: A description of the city's system for tracking and recording non-stormwater discharges.

COMPLIANCE ACTIVITIES / ENFORCEMENT
A description of the Enforcement Response Plan procedures and actions for violations of municipal stormwater requirements, ordinance or code identified during inspections.

ILLICIT DISCHARGE PUBLIC AWARENESS AND REPORTING PROGRAM
Practices to promote, publicize, and facilitate public reporting of illicit discharges to or from the municipal storm sewer system.

IV. MUNICIPAL FACILITIES POLLUTION PREVENTION / GOOD HOUSEKEEPING PRACTICES – The SWMP shall detail the components and implementation of the city's pollution prevention and good housekeeping practices as follows:

MUNICIPAL EMPLOYEE TRAINING
A description of training to educate and update staff on proper street repair and road improvement practices, handling, storage, transportation, and disposal of used oil or other toxic and hazardous materials, procedures and spill management practices to prevent or minimize spills.

MUNICIPALLY-OWNED AND OPERATED FACILITIES

- Municipal Facility Inventory: Upon completion, include the inventory, list, database, or map of facilities owned and operated by Tucson (excluding office and administration buildings) that have the potential to discharge pollutants to waters of the U.S. This information shall include the name and address of the facility, latitude/longitude, facility contact, the operational status (operating or closed), the Standard Industrial Classification (SIC) code(s) which best reflects the services provided by each facility, and brief description of activities that may generate pollutants of concern as well as pollutants of concern and other factors of risk at such facilities. These include, but are not limited to, the following types of facilities:

  - City parks, golf courses, and other recreational facilities where landscape maintenance, herbicide, pesticide, and fertilizer application, and waste management are implemented);
  - Public swimming pools (pool maintenance/repair and chemical storage);
  - Water treatment plants;
  - Fire stations and other city fleet maintenance facilities (vehicle washing and maintenance, chemical handling, waste storage);
  - Material and waste storage and processing facilities, including oil collection facilities.

- Higher Risk Facilities: Identification of 'higher risk' municipal facilities (or categories of facilities) that may be the most significant sources of pollutants or otherwise may have a higher risk of contributing pollutants to the storm sewer system, including a description of the basis (criteria) for establishing these facilities as higher risk facilities. Identification of risk may be based on the type of facility, the products or services provided by the facility,

  proximity to receiving waters, receiving water quality, and other factors that indicate the potential to impact water quality.

Include the process for developing, reviewing, prioritizing, and updating this information on a periodic basis shall be described in the SWMP. Provide as an attachment, the inventory of municipal facilities.

- Proper management of used oils and toxics: Describe practices used to facilitate the proper management and disposal of used oil and toxic materials generated by the MS4.

- Controls for pesticides, herbicides, and fertilizers: The SWMP shall describe a program to effectively minimize pollution from pesticide/herbicide use at city facilities. Tucson shall only apply pesticides that are Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) approved for aquatic application in any area within or adjacent to a water of the U.S., including ephemeral washes.

INSPECTIONS
Define areas of the MS4 drainage system that are a priority for inspection, based on system history, and other concerns. Stormwater Management Evaluations (Municipal Facilities) [3]: A general plan for review of stormwater management practices, control measures, and maintenance procedures implemented at municipally-operated facilities to minimize the discharge of pollutants from the site. Include a process to evaluate compliance with state (i.e., the requirement for AZPDES permits) stormwater requirement as applicable.

SYSTEM MAINTENANCE
Practices for operating and maintaining public streets, roads and highways, maintenance of stormwater collection and conveyance structures to minimize discharges to and from the municipal storm sewer system, and rationale for sweeping frequency, including the following:

- Drainage System Visual Monitoring
- Maintenance Priorities and Schedule
- System Maintenance practices (drainage channels, washes, roadway catch basins/storm drain inlets and retention basins) and cleaning activities
- Street/Parking Lot Sweeping Program (frequency, priorities, schedule)
- Street Repair Practices (staff training and standard control measures and procedures for repairs and improvements in a manner that protects stormwater and storm drains)

MUNICIPAL SYSTEMS MAPS
Upon completion, include maps of the MS4 system showing the following items:

- Linear Drainage Structures: Line layer showing the location of all stormwater system pipes and the direction of stormwater flow.
- Storm Drain Inlets and Catch Basins: Point layer showing the locations of all storm drain inlets and catch basins.
- Outfalls: Point layer showing the location of all major outfalls (pipes or culverts); polygon layer showing the drainage area associated with each of the monitored outfalls identified in Table 1 of the permit.
- Detention/Retention Basins: Point or polygon layer showing the locations of all identified city-owned retention and detention basins that are connected to the municipal storm water conveyance system (i.e., that receive drainage from or discharge to a storm water conveyance).
- Jurisdictional MS4 Boundary: Line or polygon layer showing the jurisdictional boundaries of the MS4, including any new land annexations during the permit term.

V. INDUSTRIAL SITES (Non-Municipally Owned) POLLUTION PREVENTION / GOOD HOUSEKEEPING PRACTICES – A description of a program to monitor and control pollutants in storm water discharges from industrial facilities that contribute pollutants to the MS4, including the following information:

MUNICIPAL EMPLOYEE TRAINING

A description of the training to educate and update inspectors on stormwater management practices and control measures for facilities subject to inspection. Training shall include information on requirements for storm water discharges associated with industrial activity.

INVENTORY

- Industrial Facility Inventory: A process to develop and maintain an inventory of industrial facilities not operated by the city, which have the potential to discharge to the MS4. This is to include the facility name and address and the Standard Industrial Classification (SIC) code(s) which best reflects the principal products or services provided by each facility, and a brief description of facility activities (i.e., automobile service and repair facilities, salvage yard, etc.). The inventory shall include the following:
  - Industrial facilities identified in 40 CFR 122.26(d)(2)(iv)(C); and
  - Other industrial and/or commercial sources (or categories of sources) which may be significant sources of pollutants.
- Higher Risk Facilities: Identification of industrial or commercial facilities (or categories of facilities) that may be the most significant sources of pollutants or otherwise may have a higher risk of contributing pollutants to the storm sewer system, including a description of the basis (criteria) for establishing these facilities as higher risk facilities. Identification of risk may be based on the type of facility (i.e., nature of industrial activity), the products or services provided by the facility, proximity to receiving waters, receiving water quality, and other factors that indicate the potential to impact water quality.

Describe the system used to track and maintain this information.

- AZPDES Non-filers: A description of the method for tracking and reporting industrial facilities that are not authorized by ADEQ (i.e., NOI authorization) under the AZPDES Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial facilities, including the type of information that is reported to ADEQ.
- Other Measures to Control Pollutants from Landfills, Municipal Waste Facilities, and Industrial Facilities: A description of any other practices implemented to control pollutants from landfills, municipal waste facilities, and industrial facilities.

INSPECTIONS

Describe the inspection and prioritization program of industrial facilities and monitoring of discharges associated with industrial facilities that may impact stormwater, including the following:

- Inspection Procedures: A description of standard procedures for inspecting industrial facilities, documenting facility conditions, and reporting potential sources of pollutants or illicit discharges. Describe the system to document and retain the inspection findings.

- Industrial Facility Inspections – Higher Risk: A description of the inspection program implemented for higher risk industrial or commercial facilities (or categories of facilities) to identify and eliminate potential discharges of pollutants to the storm sewer system, verify implementation and maintenance of stormwater control measures in compliance with municipal stormwater ordinances, and confirm ADEQ permit authorization to discharge stormwater associated with industrial activity (as applicable). Include information on the schedule for inspecting higher risk facilities throughout the permit term.

- identify and eliminate potential discharges of pollutants to the storm sewer system, verify implementation and maintenance of stormwater management practices in compliance with municipal stormwater ordinances, and confirm ADEQ authorization to discharge stormwater associated with industrial activity, as applicable (i.e., NOI Authorization). Include information on the schedule for inspecting higher risk facilities (i.e. frequency of inspections) throughout the permit term.

COMPLIANCE ACTIVITIES / ENFORCEMENT
A description of the Enforcement Response Plan procedures and actions for violations of municipal stormwater requirements, ordinance or code identified during inspections.

VI. CONSTRUCTION SITES – A description of a program to reduce pollutants in stormwater runoff from construction sites to the MS4, including the following information:

MUNICIPAL EMPLOYEE TRAINING
A description of training to educate and update staff on grading and design standards, review procedures, requirements for structural and non-structural management practices on sites, ordinances related to stormwater and construction, construction control measure maintenance requirements, inspection procedures, and enforcement procedures.

PLANNING AND LAND DEVELOPMENT
A description of low impact development (LID) practices, applicability, regulatory hurdles, and other factors that would contribute to the reduction of pollutants in stormwater discharges from new construction, significant redevelopment, and retrofits of commercial and residential areas.

- Include the names and departments of the individuals involved in the LID evaluation and Master Plan review. Include individuals from Planning and Land Development Services, Engineering, and other applicable city departments.

- The city shall evaluate the potential for incorporating additional Low Impact Development (LID) practices into the city's site planning and development processes.

PLAN REVIEW AND APPROVAL
Include a description of the plan review (including post-construction controls) and approval process. These procedures for site planning shall incorporate consideration of potential water quality impacts, including the following practices:

- Maintaining a construction project inventory.

- MS4 Plan Review of construction sites[4] (i.e., what types of sites are reviewed; approvals or permits required; MS4 process summary).

- Plan Approvals (or Permits): A description of the approval process to authorize new construction projects (such as municipal stormwater permits) upon verification that construction plans (stormwater pollution prevention or management plans) comply with municipal stormwater requirements for stormwater management practices, and that the operator has obtained AZPDES authorization (NOI authorization) to discharge stormwater associated with construction activity.

INVENTORY
A description of the method for tracking and reporting construction stormwater general permits. Include the system of non-filer notification and means of communication with operators of these facilities to inform them of their responsibility to comply.

INSPECTIONS
A detailed description of the inspection program including: practices, priorities, frequency, percentages, and timing.

COMPLIANCE ACTIVITIES / ENFORCEMENT
A description of the enforcement strategy/actions (including types, procedures, and timelines).

OTHER PRACTICES TO CONTROL POLLUTANTS FROM CONSTRUCTION ACTIVITIES
A description of any other practices (structural or non-structural practices) the city employs to control pollutants from construction sites.

VIII. POST-CONSTRUCTION – Planning procedures and post-construction practices to reduce the discharge of pollutants from newly-developed and redeveloped areas to the MS4, including a brief summary of:

MUNICIPAL EMPLOYEE TRAINING
A description of training to educate and update staff on grading and design standards, review procedures, requirements for structural management practices on sites, post-construction ordinances applicable to stormwater controls or quality, design and maintenance standards applicable to post-construction (including standard review and implementation processes), inspection procedures, and enforcement procedures.

POST CONSTRUCTION CONTROLS
A description of the maintenance and inspection and tracking program, municipal requirements relating to structural and non-structural stormwater management practice, and ordinances as related to stormwater, including the following:

- Tucson shall establish standard procedures and practices for design and maintenance of post-construction stormwater controls (such as standards for open space preservation, on-site stormwater retention, and maintenance of pre-construction run-off rates and long-term maintenance controls.

COMPLIANCE ACTIVITIES / ENFORCEMENT
A description of the enforcement strategy/actions (including types, procedures, and timelines) and a description of the maintenance responsibilities through policies, maintenance agreements, and easements.

SWMP ATTACHMENTS:

As per the provisions of the permit, some of the following may not be initially developed or fully developed at the time of submittal of the revised SWMP. In this case, the city is to attach those available and provide a status of those that are not yet developed.

- Drainage system maps;
- Map or inventory and location of structural control facilities (retention and detention basins, conveyances, major infiltration structures);
- Map or inventory of major outfalls, with latitude and longitude and drainage area;
- Inventory of municipal facilities and operations with a potential for significant discharge of pollutants to stormwater;
- Map or inventory of municipally-owned and operated "categorical" industrial facilities (facilities listed in 40 CFR 122.26(b)(14)(i) through (ix) and (xi), with SIC number and AZPDES permit number(s);
- Map or Inventory of non-municipal "categorical" industrial (and commercial) facilities (facilities listed in 40 CFR 122.26(b)(14)(i) through (ix) and (xi), with SIC number and AZPDES permit numbers;
- Identification of all open and closed landfills, hazardous waste treatment, storage, or disposal facilities, and facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA);
- Copy of each ordinance addressing stormwater issues, including construction activity, development/planning, post-construction, illicit discharges, connections, and dumping, industrial activity, used oil and waste disposal, sanitary sewer use, etcetera; and
- Certification Statement (Refer to Section 9.2 and 9.12 of the permit).

ENDNOTES:

1 Major Outfall: means a municipal separate storm sewer outfall from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more, or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more). [40 CFR 122.26(b)(5)]

2 Field Screening Procedures: As set forth at 40 CFR 122.26(d)(1)(iv)(D).

3 Stormwater Management Evaluation (Municipal Facilities):
Industrial facilities listed at 40 CFR 122.26(b)(14)(i) through (ix) and (xi) that have the potential to discharge stormwater to waters of the U.S. or to a MS4 are subject to the AZPDES industrial permit (a.k.a. Multi-Sector General Permit) for stormwater discharges associated with industrial activity, including landfills, treatment works, and airports. These facilities are required to obtain AZPDES general or individual permit authorization, file a Notice of Intent (NOI) to discharge, develop and implement a SWPPP, perform facility inspections, monitor stormwater, etc.

Other commercial, industrial, or municipal facilities, such as waste transfer stations or sludge disposal sites, which have the potential to discharge to a MS4, are subject to municipal stormwater requirements (i.e., ordinances protecting the MS4). These facilities must implement stormwater control measures to minimize discharges to the MS4. All municipally-owned or operated facilities should be evaluated to ensure compliance with municipal and state stormwater requirements as applicable.

4 Site plan review and inspection requirements apply to construction projects disturbing one (1) acre or more, or less than one (1) acre if part of a larger common plan of development, except for sites which receive a stormwater permit exemption under 40 CFR 122.26(b)(15)(i)(A) or (B).